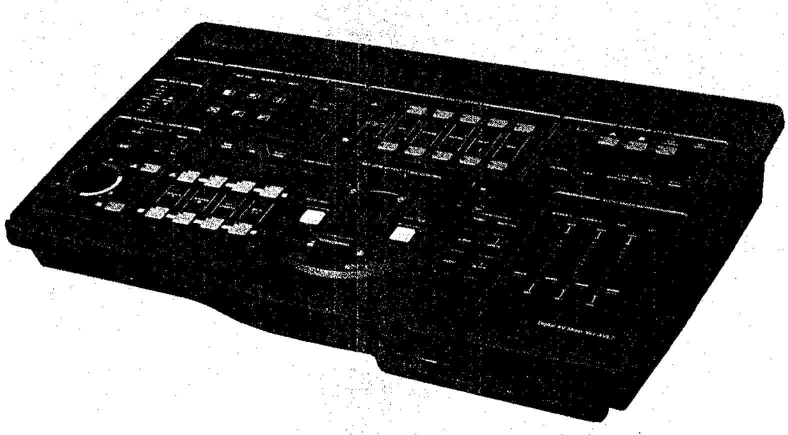
ORDER NO. AVS9310785C8

Service Manual

Digital AV Mixer

WJ-AVE7



SPECIFICATIONS

Models:	WJ-AVE7/A; for Australia WJ-AVE7/B; for U.K. (United Kingdom) WJ-AVE7/G; for Europe Others WJ-AVE7/C; for PAL other countries
Source Input:	X2 (SOURCE 1/2)
Video Input:	1.0Vp-p/75ohms PAL composite signal, pin-jacks
Y/C Input:	Y signal; 1.0Vp-p/75ohms, C signal; 0.3Vp-p/75ohms Mini Din 4 pin connector
Audio Input:	–6dBs/20kohms pin jacks (L/R)
External Camera Input:	X1 (EXT CAMERA)
Video Input:	1.0Vp-p/75ohms PAL composite signal, pin-jack
Y/C Input:	Y signal; 1.0Vp-p/75ohms, C signal; 0.3Vp-p/75ohms Mini Din 4 pin connector
External Sound Input:	
Mic Input:	X1 (MIC); –60dBv/600ohms, unbalanced, tip-ring-sleeve type phone jack
Aux.Input:	X1 (AUX); –6dBs/20kohms, pin jacks (L/R)
Character Input:	X1 (TITLE); 10-pin connector for optional Character Generator WJ-TTL5
Recording Output:	X2 (REC OUT 1/2)
Video Output:	1.0Vp-p/75ohms PAL composite signal, pin-jacks
Y/C Output:	Y signal; 1.0Vp-p/75ohms, C signal; 0.3Vp-p/75ohms Mini Din 4 pin connector
Audio output:	–6dBV/1kohms, pin jacks (L/R)
Monitor Output:	X2 (MONITOR OUT); 1.0Vp-p/75ohms PAL composite signal, pin-jacks
Headphone Output:	X1 (HEADPHONE); –20dBv - –80dBv, 8ohms unbalanced, tip-ring-sleeve type phone-jack

Panasonic

Effects:	
Video:	Still, Strobe, Mosaic, Paint, Negative, Wipe, Mix, Superimpose, Fade, Picture-In-Picture, Colour Correction
Audio:	Mix, Fade
Back Colour:	White, Yellow, Cyan, Green, Magenta, Red, Blue, Black
Wipe Patterns:	96 patterns
Others:	One-way, Reverse, Multi, Position
Video Gain:	Unity
S/N (typical):	Video; 48dB (composite), 48dB (Y/C) Audio; 60dB
Power Source:	220-240VAC, 50Hz
Power Consumption:	Approx. 18 Watts
Ambient Operating Temperature:	0°C - 40°C
Ambient Operating Humidity:	Less than 90%
Dimensions:	480(W) X 85(H) X 320(D) mm [18-7/8"(W) X 3-3/8"(H) X 12-5/8"(D)]
Weight:	3.0 kg (6.6 lbs.)

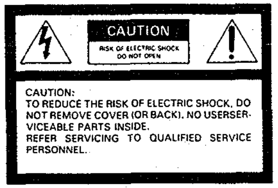
Weight and dimensions indicated above are approximate.
Specifications are subject to change without notice.

Standard Accessory

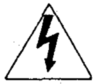
Power Cord	1pc.

Optional Accessory

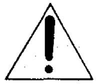
Character Generator	WJ-TTL5



CAUTION:
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USERSERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol warns the user that uninsulated voltage within the unit may have suificient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any inside part of this unit.



This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included.
Therefore, it should be read carefully in order to avoid any problems.

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are shaded on the schematic diagram and on the replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

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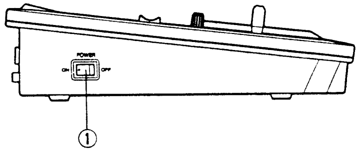
MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS

■ Side View

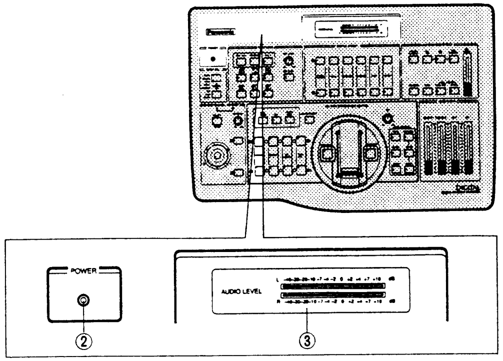
(1) Power Switch (POWER ON/OFF)


POWER
ON
OFF
①

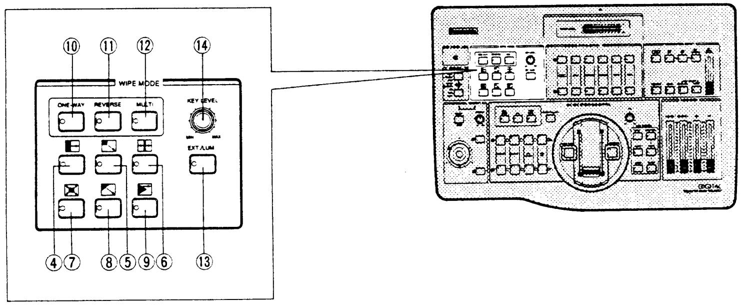
■ Indicator Section

(2) Power Indicator (POWER)

(3) Audio Level Indicator (AUDIO LEVEL)
This indicator shows the audio output level of REC OUT 1 and REC OUT 2 on the rear panel.
Note: REC OUT 1 and REC OUT 2 provide the same audio signal.


POWER
AUDIO LEVEL
②
③

■ Wipe Mode Section (WIPE MODE)


⑩
⑪
⑫
⑭
WIPE MODE
ONE-WAY
REVERSE
MULTI
KEY LEVEL
EXT/LUM
④⑦
⑧⑤⑨⑥
⑬

(4) Straight Wipe Button

(5) Corner Wipe Button

(6) Split Wipe Button

(7) Square Wipe Button

(8) Diagonal Wipe Button

(9) Triangle Wipe Button

(10) One-way Wipe Button (ONE-WAY)

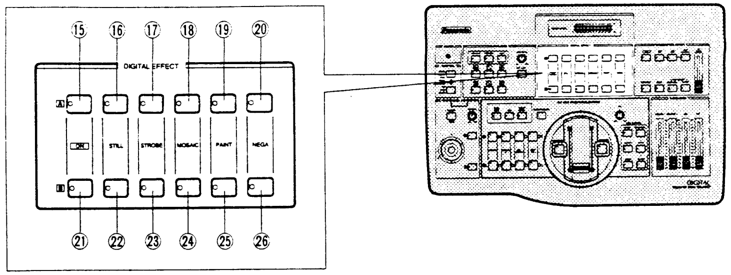
(11) Reverse Wipe Button (REVERSE)

(12) Multiple Wipe Button (MULTI)

(13) External/Luminance Key Button (EXT/LUM)
Used to select either the External Key or the Luminance Key function.

(14) Key Level Control (KEY LEVEL)
For adjusting the External Key Level and Luminance Key Level.

■ Digital Effect Section (DIGITAL EFFECT)


⑮
⑯
⑰
⑱
⑲
⑳
DIGITAL EFFECT
A
ON
STILL
STROBE
MOSAIC
PAINT
NEGA
B
㉑
㉒
㉓
㉔
㉕
㉖

(15) A-bus ON/OFF Button (ON - A)
For adding Digital Effects to the A-bus picture except Back Colour (BACK COL) (42).

(16) Still Button (STILL)

(17) Strobe Button (STROBE)

(18) Mosaic Button (MOSAIC)

(19) Paint Button (PAINT)

(20) Negative Button (NEGA)
Note: Buttons (16) to (20) are for the A-bus.

(21) B-bus ON/OFF Button (ON - B)
For adding Digital Effects to the B-bus picture except Back Colour (BACK COL) (43).

(22) Still Button (STILL)

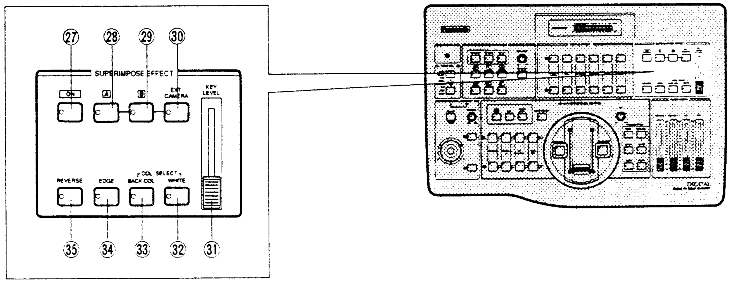
(23) Strobe Button (STROBE)

(24) Mosaic Button (MOSAIC)

(25) Paint Button (PAINT)

(26) Negative Button (NEGA)
Note: Buttons from (22) to (26) are for the B-bus.

■ Superimpose Effect Section (SUPERIMPOSE EFFECT)


㉗
㉘
㉙
㉚
SUPERIMPOSE EFFECT
ON
A
B
EXT CAMERA
KEY LEVEL
REVERSE
EDGE
COL SELECT
BACK COL
WHITE
㉟
㉞
㉝
㉜
㉛

(27) Superimpose ON/OFF Button (ON)
For activating the Superimpose Effect function.

(28) A-bus Button (A)
Used to select the A-bus picture as a key signal.

(29) B-bus Button (B)
Used to select the B-bus picture as a key signal.

(30) External Camera Button (EXT CAMERA)
Used to select an external camera picture as a key signal.

(31) Key Level Control (KEY LEVEL)
The key level (slice level) of a superimposed scene can be adjusted.

(32) White Button (COL. SELECT/WHITE)
Used to make a white superimposed scene

(33) Back Colour Button (COL.SELECT/BACK COL.)
Used to add a colour to a superimposed scene.

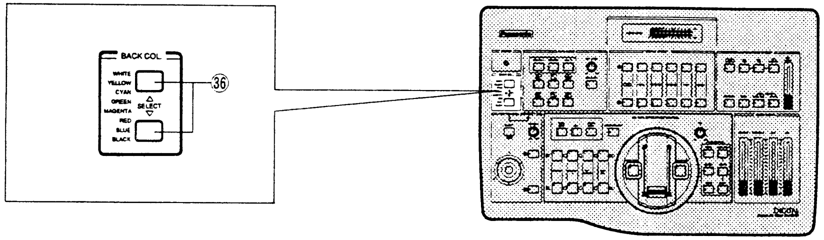
(34) Edge Button (EDGE)
Used to add an edge to a superimposed scene.

(35) Reverse Button (REVERSE)
The superimposed scene and the background scene become opposite in position.

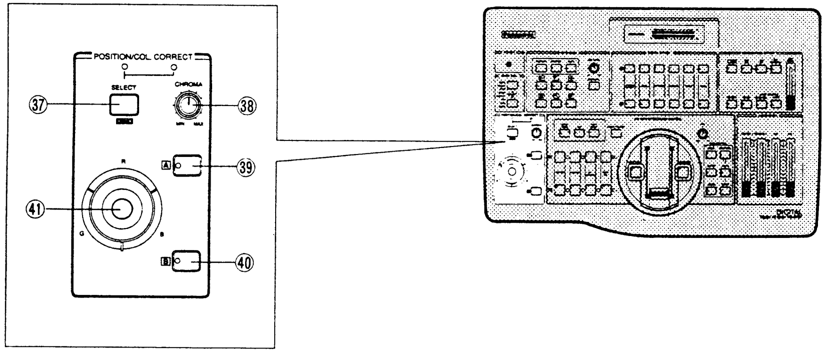
■ Back Colour Section (BACK COL.)

(36) Back Colour Selection Button (BACK COL. SELECT)

A back colour can be selected by pressing either of these buttons.


BACK COL
WHITE
YELLOW
CYAN
GREEN
MAGENTA
RED
BLUE
BLACK
SELECT
(36)

■ Positioner/Colour Correction Section (POSITION/COL.SELECT)


POSITION/COL. CORRECT
SELECT
CHROMA
(37)
(38)
(39)
(40)
(41)

(37) Positioner/Colour Correction Selection Button (SELECT/DEMO)

Used to select either the POSITION function or COL. CORRECT function. Also used to start the preprogrammed demonstration.

(38) Chroma Level Control (CHROMA)

For adjusting the colour level.

(39) A-bus Button (A)

Colour correction can be made for the A-bus picture except Back Colour (BACK COL) (42)

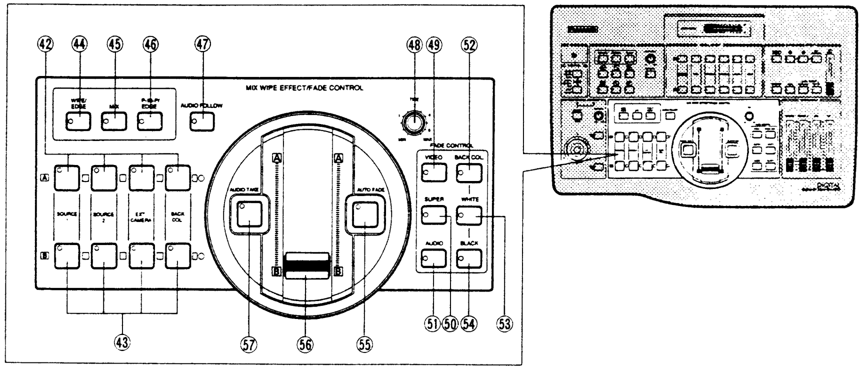
(40) B-bus Button (B)

Colour correction can be made for the B-bus picture except Back Colour (BACK COL) (43).

(41) Joystick Control

This Joystick Control has two functions - setting the position of the Diagonal Wipe Pattern (7)/P-IN-P Picture (46) and correcting the colour of A-bus/B-bus.

■ Mix Wipe Effect/Fade Control Section (MIX WIPE EFFECT/FADE CONTROL)


(42)
(44)
(45)
(46)
(47)
(48)
(49)
(52)
MIX WIPE EFFECT/FADE CONTROL
WIPE/EDGE
MIX
P-IN-P/EDGE
AUDIO FOLLOW
TIME
FADE CONTROL
VIDEO
BACK COL
SUPER
WHITE
AUDIO
BLACK
AUTO TAKE
AUTO FADE
SOURCE 1
SOURCE 2
EXT CAMERA
BACK COL
A
B
(43)
(57)
(56)
(55)
(51)
(50)
(54)
(53)

(42) A-bus Selection Buttons (A)

SOURCE 1:

Used to select Source 1 Audio/Video Signals (66) (67) (68) supplied to the rear panel.

SOURCE 2:

Used to select Source 2 Audio/Video Signals (70) (71) (72) supplied to the rear panel.

EXT CAMERA:

Used to select External Camera Signal (74) (75) supplied to the rear panel.

BACK COL.:

Used to select the Back Colour (36).

(43) B-bus Selection Buttons (B)

Same selection can be available as mentioned in the A-bus Selection Buttons (42).

(44) Wipe Button (WIPE/EDGE)

For selecting the Wipe Effect.

(45) Mix Button (MIX)

For the Mix Effect.

(46) Picture-In-Picture Button (P-IN-P/EDGE)

For the Picture-In-Picture Effect.

(47) Audio Follow Button (AUDIO FOLLOW)

When this button is pressed, the audio on the A-bus and B-bus can be changed according to the relative percentage position of the Mix/Wipe Control (56).

(48) Time Control (TIME)

For adjusting the transition time of Auto Fade Function (55) and Auto Take Function (57).

(49) Video Button (VIDEO)

Used to fade-in/out the video, but not audio.

(50) Superimpose Button (SUPER)

Used to fade-in/out the superimposed picture.

(51) Audio Button (AUDIO)

Used to fade-in/out the audio.

(52) Back Colour Button (BACK COL)

For fading out to the Back Colour scene.

(53) White Button (WHITE)

For fading out to the white scene.

(54) Black Button (BLACK)

For fading out to the black scene.

(55) Auto Fade Button (AUTO FADE)

Automatic fade can be executed according to the time set by TIME Control (48).

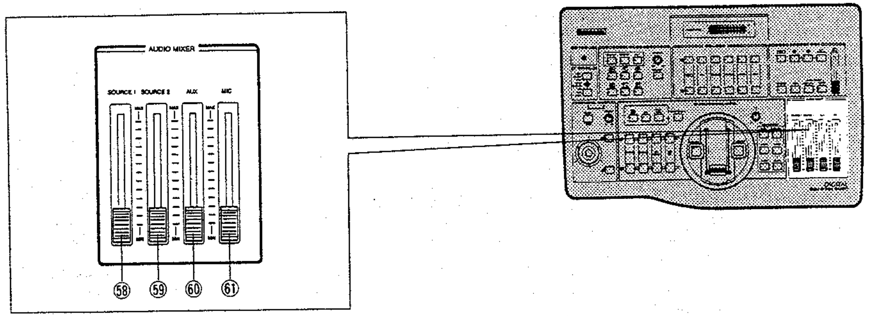
(56) Mix/Wipe Control (MIX WIPE EFFECT)

Mix and wipe can be performed by operating this control.

(57) Auto Take Button (AUTO TAKE)

Automatic wipe or mix can be executed accoring to the time set by TIME Control (48).

■ Audio Mixer Section (AUDIO MIXER)


AUDIO MIXER
SOURCE 1
SOURCE 2
AUX
MIC
(58)
(59)
(60)
(61)

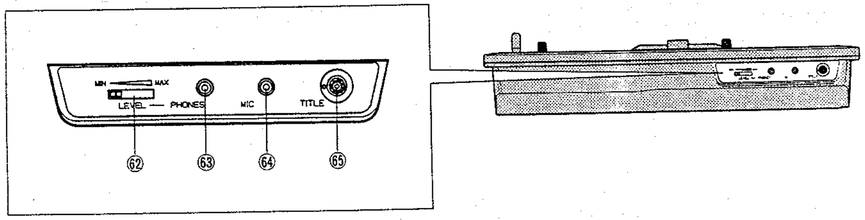
(58) Source 1 Audio Fader (SOURCE 1)
Used to adjust the level of Source 1 Audio Signal supplied to Source 1 Audio Input Jack (66).

(59) Source 2 Audio Fader (SOURCE 2)
Used to adjust the level of Source 2 Audio Signal supplied to Source 2 Audio Input Jack (70).

(60) Auxiliary Audio Fader (AUX)
Used to adjust the level of Auxiliary Audio Signal supplied to Auxiliary Audio Input Jack (76).

(61) Mic Audio Fader (MIC)
Used to adjust the level of Microphone Audio Signal supplied to Microphone Jack (64).

■ Front Panel


MIN
MAX
LEVEL
PHONES
MIC
TITLE
(62)
(63)
(64)
(65)

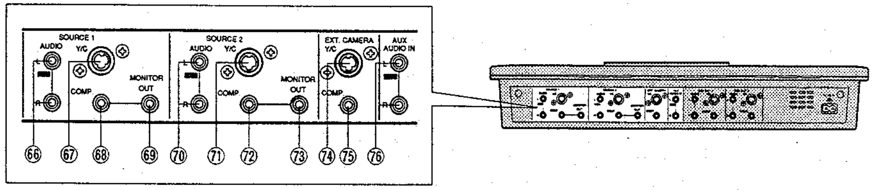
(62) Headphone Audio Level Control (LEVEL)

(63) Headphone Jack (PHONES)

(64) Microphone Jack (MIC)

(65) Titler Connector (TITLE)

■ Rear Panel 1


SOURCE 1
AUDIO
Y/C
COMP
MONITOR OUT
SOURCE 2
AUDIO
Y/C
COMP
MONITOR OUT
EXT. CAMERA
Y/C
COMP
AUX AUDIO IN
(66)
(67)
(68)
(69)
(70)
(71)
(72)
(73)
(74)
(75)
(76)

(66) Source 1 Audio Input Jack (SOURCE 1 AUDIO)

(67) Source 1 S-Video Input Connector (SOURCE 1 Y/C)

(68) Source 1 Composite Video Signal Input Jack (SOURCE 1 COMP.)
For connecting PAL standard video signal.

(69) Source 1 Monitor Output Jack (SOURCE 1 MONITOR OUT)
For monitoring Source 1 Composite Video Signal.

(70) Source 2 Audio Input Jack (SOURCE 2 AUDIO)

(71) Source 2 S-Video Input Connector (SOURCE 2 Y/C)

(72) Source 2 Composite Video Signal Input Jack (SOURCE 2 COMP.)
For connecting PAL standard video signal.

(73) Source 2 Monitor Output Jack (SOURCE 2 MONITOR OUT)
For monitoring Source 2 Composite Video Signal

(74) External Camera S-Video Input Connector (EXT CAMERA Y/C)

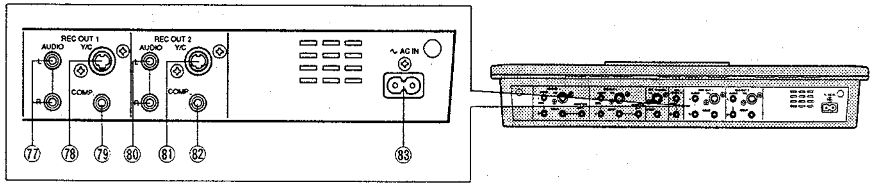
(75) External Camera Composite Video Input Jack (EXT CAMERA COMP.)
For connecting PAL standard camera signal.

Notes:

1. If both an S-video signal and a composite video signal are supplied to Source 1 (Source 2 or External Camera) at the same time, only the S-video signal is used as Source 1 (Source 2 or External Camera) input signal.
2. A jittery external camera signal from a VTR, for example, can cause a disturbance in synchronization or colour.

(76) Auxiliary Audio Input Jack (AUX AUDIO IN)

■ Rear Panel 2


REC OUT 1
AUDIO
Y/C
COMP
REC OUT 2
AUDIO
Y/C
COMP
AC IN
(77)
(78)
(79)
(80)
(81)
(82)
(83)

(77) Recording Out 1 Audio Output Jack (REC OUT 1 AUDIO)

(78) Recording Out 1 S-Video Output Connector (REC OUT 1 Y/C)

(79) Recording Out 1 Composite Video Output Jack (REC OUT 1 COMP.)

(80) Recording Out 2 Audio Output Jack (REC OUT 2 AUDIO)

(81) Recording Out 2 S-Video Output Connector (REC OUT 2 Y/C)

(82) Recording Out 2 Composite Video Output Jack (REC OUT 2 COMP.)
Note: The same audio and video signals are supplied to both Recording Out 1 and Recording Out 2.

(83) Power Socket (AC IN)
Connect the Power Cord (provided) to this socket.

CIRCUIT DESCRIPTION

IC Description

1. Main Board

1-1 IC100, IC102, IC201, IC203

This IC (YWNJM2246M) is used for selecting source signal.

- IC100 ... Selector of source signal (luminance) supplied to A-bus circuit.
- IC102 ... Selector of source signal (chrominance) supplied to A-bus circuit.
- IC201 ... Selector of source signal (luminance) supplied to B-bus circuit.
- IC203 ... Selector of source signal (chrominance) supplied to B-bus circuit.

The pin identifications of this IC are as follows.

Pin No	Name	IN/Out	Description
1	Vin1	In	Signal input 1
2	CTL1	In	Control input 1
3	Vin2	In	Signal input 2
4	CTL2	In	Control input 2
5	Vin3	In	Signal input 3
6	VDD	In	+5V
7	V OUT	Out	Signal output
8	GND	-	Ground

Truth table

CTL1	CTL2	V OUT
L	L	Vin 1
H	L	Vin 2
L/H	H	Vin 3

1-2 IC105, IC205

This IC (YWM51271FP) is used for making R-Y and B-Y signals. The pin identifications of this IC are as follows.

Pin No	Name	IN/Out	Description
1	BFG	Out	Burst gate pulse position output
2	BFGW	In	Burst gate pulse width adjust input
3	C OUT	Out	Chroma signal output
4	C CONT	In	Chroma saturation control input
5	C IN+	-	Chroma signal input
6	IN-	-	Input bypass capacitor connecting terminal
7	ACC	-	ACC filter connecting terminal
8	REF	-	Reference voltage
9	APC	-	APC filter connecting terminal
10	VCXO OUT	Out	VCXO output (17.73 MHz)
11	TINT	In	Tint control signal input
12	VCXO IN	In	VCXO input (17.73 MHz)
13	GND	-	Ground
14	B-Y IN	In	B-Y signal input
15	VCC	In	+5V
16	R-Y IN	In	R-Y signal input
17	N/P	In	NTSC/PAL mode select
18	SC	Out	Subcarrier signal output
19	B-Y OUT	Out	B-Y signal output
20	R-Y OUT	Out	R-Y signal output
21	KIL	-	Killer filter capacitor connecting terminal
22	KIL REF	-	Killer reference filter capacitor connecting terminal
23	BLK IN	In	Wide horizontal drive pulse input
24	HD IN	In	Wide horizontal drive pulse input
25	VIDEO IN	In	Luminance (Y) signal input
26	SEP	-	Sync separator feed back capacitor connecting terminal
27	SEP LEV	In	Sync separator slice level input
28	SYNC OUT	Out	Sync signal output

1-3 IC111, IC211

This IC (MC74HC4053F) is used for multiplexing R-Y and B-Y signals

The pin identifications of this IC are as follows.

Pin No	Name	IN/Out	Description
1	Y1B	In	B-Y signal input
2	Y0B	In	R-Y signal input
3	Y1C	-	Ground
4	ZC	-	Not used
5	Y0C	-	Ground
6	1NH	-	Ground
7	GND	-	Ground
8	GND	-	Ground
9	SC	-	Ground
10	SB	In	Signal select control
11	SA	-	Ground
12	Y0A	-	Ground
13	Y1A	-	Ground
14	ZA	-	Not used
15	ZB	Out	Signal output
16	VCC	In	+5V

1-4 IC120-121, IC220-221

This IC (YWMN6550BS) is used for converting signal from analog to digital.

The pin identification of this IC are as follows.

Pin No	Name	IN/Out	Description
1	NC	-	Not used
2	VDD	In	+5V
3	VRT	In	Top voltage
4	VSS	-	Ground
5	NC	-	Not used
6-10	DO2-DO6	Out	Data output
11	VDD	In	+5V
12	VSS	-	Ground
13	CLK	In	Clock input
14-15	D00-D01	Out	Data output
16-17	NC	-	Not used
18	VRB	In	Bottom voltage
19	NC	-	Not used
20	VDD	In	+5V
21	VSS	-	Ground
22	SI	In	Signal input

1-5 IC310

This IC (YWLM1881M) is used for separating composite sync signal from External luminance signal.

The pin identification of this IC are as follows.

Pin No	Name	IN/Out	Description
1	C. SYNC	Out	Composite sync signal output
2	V in	In	External luminance signal input
3	V. SYNC	-	Not used
4	GND	-	Ground
5	BG	-	Ground
6	R SET	-	Pulse timing control
7	O/E OUT	-	Not used
8	VCC	In	+5V

1-6 IC360

This IC (YWUPC664GS) is used for converting signal from digital (8 bits data) to analog.

The pin identification of this IC are as follows.

Pin No	Name	IN/Out	Description
1-8	DY1-DY8	In	Y. data input
9-16	DC1-DC8	In	C. data input
17	C. CLK	In	C. clock pulse input
18	Y. CLK	In	Y. clock pulse input
19	GND	-	Ground
20	DVCC	In	+5V
21	COMP	-	Phase comparator terminal
22	AVCC	In	+5V
23	VR OUT	Out	Reference voltage output
24	V REF	In	Reference voltage input
25	VR SET	In	Reference voltage setting input
26	GND	-	Ground
27	C. OUT	Out	C. signal output
28	GND	-	Ground
29	Y. OUT	Out	Y. signal output
30	GND	-	Ground
31	AVCC	In	+5V
32	DVCC	In	+5V
33-36	NC	-	Not used

1-7 IC552

This IC (YWMD027AN004) is used for mixing A and B-bus signal data and also encodes the R-Y/B-Y data into C data.

The pin identifications of this IC are as follows.

Pin No	Name	IN/Out	Description
1-2	NC	-	Not used
3	VDD	In	+5V
4	VSS	-	Ground
5	PAL	In	mode select
6	BLK	In	Blanking input
7	BFP	In	Burst flag pulse input
8	BSC	In	Subcarrier input
9	LSW	In	Line switch input
10	VDD	In	+5V
11	F4SC	In	Subcarrier input (17.73 MHz)
12	VSS	-	Ground
13	H	In	Wide horizontal drive pulse input
14	V	In	Vertical drive pulse input
15-19	REG0-REG4	In	Register input
20	VDD	In	+5V
21	VSS	-	Ground
22	VDD	In	+5V
23	ST2	In	Strobe input
24-31	D0-D7	In	data input
32	VDD	In	+5V
33	VSS	-	Ground
34-36	BCD0-BCD2	In	Back colour data input

37	A0RB	In	Double P in P select input
38	VSS	-	Ground
39-42	NC	-	Not used
43	VDD	In	+5V
44	ABSUP	In	Super impose signal input
45	ASS	-	Ground
46-49	GRA0-GRA3	In	Graduation data input
50	VSS	-	Ground
51-54	GRA4-GRA7	In	Graduation data input
55	VDD	In	+5V
56-63	MD0-MD7	In	Mixed data input
64	VDD	In	+5V
65-68	MDD0-MDD3	In	Key data input
69	VDD	In	+5V
70	VSS	-	Ground
71	BOD	In	Border signal input
72	CHR	In	Character signal input
73	BCHR	In	Character edge signal input
74	SHGA	In	Shadow gate for A-bus
75	SHGB	In	Shadow gate for B-bus
76-78	TES0-TES2	-	Ground
79-82	NC	-	Not used
83	TES3	-	Ground
84	TESA	-	Ground
85	EXWP	In	External character signal input
86	YC2D	-	Not used
87	VSS	-	Ground
88	YCLK2	In	Y. clock2 input
89	VDD	In	+5V
90	TYCLK	-	Ground
91	TRCLK	-	Ground
92	RCLK	In	R. clock input
93	YCLK	In	Y. clock input
94	VSS	-	Ground
95	KBB	In	Character colour signal (blue) input
96	KBR	In	Character colour signal (red) input
97	KBG	In	Character colour signal (green) input
98	VSS	-	Ground
99	PC7	-	Ground
100	VDD	-	+5V
101-107	PC6-PC7	-	Ground
108	VDD	In	+5V
109-116	A7-A0	In	A-bus data input
117	VDD	In	+5V
118	VSS	-	Ground
119-122	NC	-	Not used
123	VDD	In	+5V
124	VSS	-	Ground
125-129	B7-B3	In	B-bus data input
130	VSS	-	Ground
131-133	B2-B0	In	B-bus data input
134	VDD	In	+5V
135	EXCAMH	In	External signal (Y) input
136	EXCAML	In	External signal (Y) input
137	VSS	-	Ground
138-145	RECC7-RECC0	Out	C. data output
146	VDD	In	+5V
147-149	RECY7-RECY5	Out	Y. data output
150	VSS	-	Ground
151-155	RECY4-RECY0	Out	Y. data output
156	VDD	In	+5V
157	SP100	In	+5V
158	VSS	-	Ground
159-160	NC	-	Not used

1-8 IC580

This IC (YWMD016AN005) generates wipe pattern data and graduation data which are supplied to IC552.
The pin identifications of this IC are as follows.

Pin No	Name	IN/Out	Description
1-2	NC	-	Not used
3	VSS	-	Ground
4-8	WP0-WP4	In/Out	Wipe edge signal input/output
9	WRST	Out	Write reset control output
10	CK19I	Out	Write clock input
11-15	CH0-CH4	In/Out	Character edge signal input/output
16	H	In	Wide horizontal drive pulse input
17	V	In	Vertical drive pulse input
18-19	SD0-SD1	-	Ground
20	VDD	In	+5V
21	VSS	-	Ground
22-31	SD2-SD11	-	Ground
32	PAL	In	Mode select
33	HIGH	-	Ground
34	PCO	Out	Phase comparator output
35	NC	-	Not used
36	OSC0	Out	Oscillator output
37	OSCI	In	Oscillator input
38	VDD	In	+5V
39-42	NC	-	Not used
43	VSS	-	Ground
44	AD2	In	+5V
45	AD4	-	Not used
46	AD8	In	+5V
47	SB16	In	+5V
48-49	TD0-TD1	-	Ground
50	VSS	-	Ground
51-58	TD2-TD9	-	Ground
59	TST7	In	+5V
60-61	TST8-TST9	-	Ground
62-69	D0-D7	In	Data input
70	VSS	-	Ground
71-76	REG0-REG5	In	Register input
77	ST1	In	Strobe input
78	VDD	In	+5V
79-82	NC	-	Not used
83-84	VSS	-	Ground
85-93	TED9-TED0	-	Not used
94	VSS	-	Ground
95	VDD	In	+5V
96	RST	In	+5V
97-99	TST6-TST4	-	Ground
100	VDD	In	+5V
101-104	TST3-TST0	-	Ground
105	KEY	-	Ground
106	CHC	In	Character signal input
107	CHBU	In	External signal (Y) input
108	CHBL	-	Ground
109	EXWP	Out	External character signal input
110	VDD	In	+5V
111	WPA	In	Double P in P gate pulse
112	VSS	-	Ground
113	WPB	In	Double P in P gate pulse
114	HRST	Out	Horizontal reset pulse output
115	VSS	-	Ground
116	YCLK	Out	Y. clock output
117	YCLK2	Out	Y. clock 2 output
118	VDD	In	+5V
119-122	NC	-	Not used
123	VSS	-	Ground
124	BCHR	Out	Character edge signal output
125	CHR	Out	Character signal output
126	BOD	Out	Border signal output
127-128	MOD3-MOD2	Out	Key data output
129	VDD	In	+5V
130	VSS	-	Ground
131-132	MOD1-MOD0	Out	Key data output
133-135	MD7-MD5	Out	Mixed data output
136	VSS	-	Ground
137-141	MD4-MD0	Out	Mixed data output
142	GRAD7	Out	Graduation data output
143	VSS	-	Ground
145-149	GRAD6-GRAD2	Out	Graduation data output
150	VSS	-	Ground
151-152	GRAD1-GRAD0	Out	Graduation data output
153	CHA	In	Super impose signal input
154	AORB	Out	Double P in P select output
155	BCD2	Out	Back colour data output
156-157	BCD1-BCD0	Out	Back colour data output
158	VDD	In	+5V

1-9 IC581

This IC (YWUPD42102G3) generates delayed signals which are used for wipe edge and character edge.
The pin identifications of this IC are as follows.

Pin No	Name	IN/Out	Description
1-4	DO0-DO3	Out	Data output
5	$\overline{\text{RE}}$	-	Ground
6	$\overline{\text{RSTR}}$	In	Read reset input
7	VSS	-	Ground
8	RCK	In	Read clock input
9-12	D04-DO7	Out	Data output
13-16	DI7-DI4	In	Data input
17	WCK	In	Write clock input
18	VDD	In	+5V
19	$\overline{\text{RSTW}}$	In	Write reset input
20	$\overline{\text{WE}}$	-	Ground
21-24	DI3-DI0	In	Data input

1-10 IC600, IC700

This IC (MN53060LBZ) is used for reading and writing datas into the memory (IC602~605 for A-bus, IC702-IC705 for B-bus). The data from memory are sent to A/B bus mixing IC (IC552).
The pin identifications of this IC are as follows.

Pin No	Name	IN/Out	Description
1	VSS	-	Ground
2	OSCO	-	Not used
3	WPCO	Out	Phase comparator output
4	EXI	In	C. Sync signal input
5	EXSYNCI	In	C. Sync signal input
6	NWHBLKO	Out	Wide horizontal drive pulse output
7	CLMPO	Out	Burst flag pulse output
8	DOCI	-	Ground
9	HI	In	Wide horizontal drive pulse input
10	VI	In	Vertical drive pulse input
11	VSS	-	Ground
12-13	TEST3-TEST2	-	Ground
14	HRST	In	Horizontal reset pulse input
15	YCLKI	In	Y. clock input
16	YCLKO	-	Not used
17	RCLKO	-	Not used

18	VDD	In	+5V
19	RSTI	In	+5V
20	VSS	-	Ground
21	BI	In	Chip selec (A/B)
22	HIGHI	-	Ground
23-24	VSS	-	Ground
25	VDD	In	+5V
26-33	YCD0-YCD7	Out	Y/C data output
34	RGO	Out	Double P in P gate pulse
35-36	D0-D1	In	Data input
37	VDD	In	+5V
38	VSS	-	Ground
39-44	D2-D7	In	Data input
45-50	REG0-REG5	In	Register input
51	STI	In	Strobe input
52-54	RHS0-RHS2	In	Read horizontal start pulse
55	VSS	-	Ground
56	PAL	In	Mode select
57	VDD	In	+5V
58	RHS3	In	Read horizontal start pulse
59-62	MC3-MC0	In	Mixed C. data input
63-70	MY7-MY0	In	Mixed Y. data input
71	RGOD	Out	Shadow gate output
72	RGI	In	+5V
73	VSS	-	Ground
74	VDD	In	+5V
75	VSS	-	Ground
76	OE3	-	Not used
77-78	OE2-OE1	Out	Output enable
78	SOC3	-	Not used
80-81	SOC2-SOC1	Out	Serial out clock
82	VDD	In	+5V
83	VSS	-	Ground
84	SIC3	-	Not used
85-86	SIC2-SIC1	Out	Serial in clock
87	RAS	Out	Row address strobe
88	CAS	Out	Column address strobe
89-91	A0-A2	Out	Address output
92	VSS	-	Ground
93	TEST0	-	Ground
94-95	VDD	In	+5V
96-100	A3-A7	Out	Adress output
101-102	VDD	In	+5V
103-104	VSS	-	Ground
105-108	CTM3-CTM0	Out	C.data output
109-110	YTM7-YTM6	Out	Y.data output
111	VDD	In	+5V
112	VSS	-	Ground
113-118	YTM5-YTM0	Out	Y.data output
119	CSEL	Out	C. select output
120	CADCK	-	Not used
121-127	CAD7-CAD1	In	C. data input
128	CAD0	-	Ground
129	VDD	In	+5V
130	TEST1	-	Ground
131	VSS	-	Ground
132	VDRP	-	Not used
133	HDRP	-	Not used
134-140	YAD7-YAD1	In	Y. data input
141	YAD0	-	Ground
142	SD1	-	Not used
143	SD0	-	Not used
144	WHRST	-	Not used
145	YADCK	Out	Y. AD clock output
146	VSS	-	Ground
147	OSC	In	Oscillator input
148	VDD	In	+5V

1-11 IC602~605, IC702~705

This IC (YWM5M4C500AV) is a field memory (320(H)×256(V)×6=491, 520 bits and used to perform digital effect functions.
The pin identifications of this IC are as follows.

Pin No	Name	IN/Out	Description
1-3	SOD4-SOD6	Out	Serial out data
4-6	SID4-SID6	In	Serial in data
7-14	A7-A0	In	Address input
15	CAS	In	Column address strobe
16	$\overline{\text{RAS}}$	In	Row address strobe
17	SIC	In	Serial in clock
18	SOC	In	Serial out clock
19	$\overline{\text{SIE}}$	In	Serial in enable
20	$\overline{\text{SOE}}$	In	Serial out enable
21	VCC	In	+5V
22	VSS	-	Ground
23-25	SID1-SID3	In	Serial in data
26-28	SOD1-SOD3	Out	Serial out data

1-12 IC800

This IC (MN676021PPS) is a sync generator which generates Necessary pulses and also automatically changed to external timing mode when external signal is supplied through Y/C or COMP input connector on the rear panel.

Pin No	Name	IN/Out	Description
1	VDD	In	+5V
2	VSS	-	Ground
3	X4SC	In	Subcarrier signal input (17.73MHz)
4	OSCI	-	Ground
5	OSC0	-	Not used
6	SCB	Out	Subcarrier signal output (4.43 MHz)
7	SCR	-	Not used
8	BSC	-	Not used
9	VPC	-	Not used
10	EXT	In	EXT/$\overline{\text{INT}}$ mode select
11	LSC	In	Line switch control input
12	LSW	Out	Line switch
13	VR	In	Vertical reset pulse input
14	XFH	In	Oscillator input
15	HOSO	In	+5V
16	HOSI	In	+5V
17	HPC	In	+5V
18	SBL	In	+5V
19	BFP	Out	Burst flag pulse output
20	WBL	-	Not used
21	CP2	-	Not used
22	CP1	-	Not used
23	CBLK	Out	Composite blanking pulse output
24	WHD	Out	Wide horizontal drive pulse output
25	VP	Out	Vertical drive pulse output
26	SYNC	Out	Composite sync signal output
27	VSS	-	Ground
28	VDD	In	+5V

1-13 IC803

This IC (MN53007LVW1) is a sync separator and pin identifications of this IC are as follows.

Pin No	Name	IN/Out	Description
1	OSCO	Out	Oscillator output
2	NC	-	Not used
3	4FSC	Out	Subcarrier output (17.73 MHz)
4-5	NC	-	Not used
6	FREQ	-	Not used
7	PCR	-	Not used
8	HO4	-	Not used
9	HO5	-	Not used
10	HREF	-	Not used
11-13	NC	-	Not used
14	EXSYNC	In	External composite sync signal input
15	PAL	In	Mode select
16	RST	In	Reset control input
17	VDD	In	+5V
18	NC	-	Not used
19	VI	In	Vertical drive pulse input
20	WHD	In	Wide horizontal drive pulse input
21	IN	In	Wide horizontal drive pulse input
22	NOUT	-	Not used
23	HS	In	Phase comparator input
24	HPCO	Out	Phase comparator output
25	NC	-	Not used
26	VR	Out	Vertical reset pulse output
27	LSWCNT	Out	Line switch control output
28	EXT	Out	EXT/$\overline{\text{INT}}$ mode select
29-30	NC	-	Not used
31-33	MONIT3-MONIT1	-	Not used
34-35	NC	-	Not used
36-38	TEST3-TEST1	-	Ground
39	VSS	-	Ground
40	NC	-	Not used
41	SC1135	-	Not used
42	NC	-	Not used
43	HSCPCO	Out	Phase comparator output
44	OSCI	In	Oscillator input

1-14 IC900

This IC (YWH7337F0AV0) is a 8 bit system control microprocessor, which performs key scanning of all front panel switches to detect any switch operation.
This IC also controls the operation of the LEDS and also controls the operation of all digital signal processing ICs.

Pin No	Name	IN/Out	Description
1	$\overline{\text{RES}}$	In	Reset pulse input
2	XTAL	In	Oscillator input
3	EXTAL	In	Oscillator input
4-5	MD1-MD0	In	+5V
6	$\overline{\text{NMI}}$	-	Ground
7	$\overline{\text{STBY}}$	In	+5V
8	VCC	In	+5V
9	MASK	Out	Mask DC Output
10-11	A/B SEL1-A/B SEL2	Out	A/B bus select control output
12	VSS	-	Ground
13	P97	Out	Key scan output
14	P96	-	Not used
15-17	P95-P93	Out	Key scan output
18	P92	-	Not used
19-20	K/LSW1-K/L SW2	Out	Key scan switch output
21	H. BLK	In	Wide horizontal drive pulse input
22-23	P61-P62	Out	Source signal select output
24	P63	Out	Auto take LED control output

25	P64	Out	Auto fade LED control output
26	P65	-	Not used
27	PAL/NTSC	In	PAL/NTSC select input
28	V. BLK	In	Vertical drive pulse input
29	VCC	In	+5V
30	AN0	In	Time control input
31	AN1	In	Key level control input
32	AN2	In	Chroma level control input
33	AN3	In	Key level control input
34	AN4	In	Mix/Wipe control input
35	AN5	In	R-Y/Positioner control input
36	AN6	In	B-Y/Positioner control input
37	AN7	-	Not used
38	VSS	-	Ground
39-46	P40-P47	Out	Key scan/LED drive output
47	VSS	-	Ground
48-55	P27-P20	Out	Key scan/LED drive output
56	VSS	-	Ground
57-64	P17-P10	Out	Data output
65-67	ST1-ST3	Out	Strobe output
68	ST4	-	Not used
69	P34	Out	Clock output
70-72	P35-P37	Out	Fade strobe output
73	VSS	-	Ground
74-75	P80-P81	-	Not used
76	P82	-	Not used
77	P83	In	Titler ID input
78	P84	-	Not used
79	P85	In	Titler ID input
80	P86	-	Not used

ADJUSTMENT PROCEDURE

1.Required Test Equipment

The following test equipments are required for adjustment.

- Oscilloscope
- Frequency Counter
- Digital Voltmeter
- Vectorscope
- Waveform Monitor
- Color Video Monitor (With Underscan Mode)
- Video Signal Generator
- Audio Signal Generator
- Extension Flat Cable (Part No. : YWVOEA0270AN)

2. Disassembling Procedure

2-1. Disassembling Procedure for Adjustment

- Remove eleven screws which fixing the upper cover and open the upper cover.

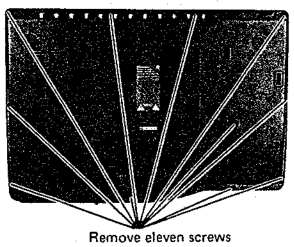

Remove eleven screws

Fig. 2-1-1

2-2. Disassembling Procedure for Main PCB Board Check

- Remove eleven screws which fixing the upper cover and open the upper cover.
- Remove five screws which fixing the upper shield case and remove the upper shield case.
- Remove two screws which fixing the Main PCB Board and remove two screws which fixing the Jack Board.

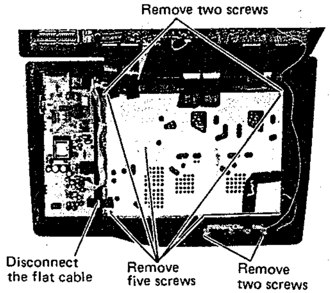

Remove two screws
Disconnect the flat cable
Remove five screws
Remove two screws

Fig. 2-2-1

- Disconnect the Flexible cable between CN3 on the Power board and CN1 on the Main Board, and connect the extension flat cable between these connectors CN3 and CN1.
- Disconnect the Title Input Connector CN6 on the Main PCB Board and stand the Main PCB Board.
- Remove the bottom shield case.

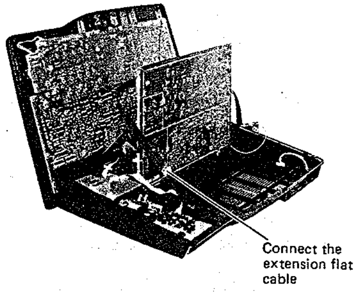

Connect the extension flat cable

Fig. 2-2-2

3.Setting up for Adjustment

Connection

- Connect the Color Video Monitor to the REC OUT 1 COMP Jack on the rear panel of WJ-AVE7 through the Waveform Monitor and Vectorscope using the coaxial cables.
- Terminate the input connector of Color Video Monitor with 75ohms.

Note: **Keep the connection of output side throughout the adjustment.**

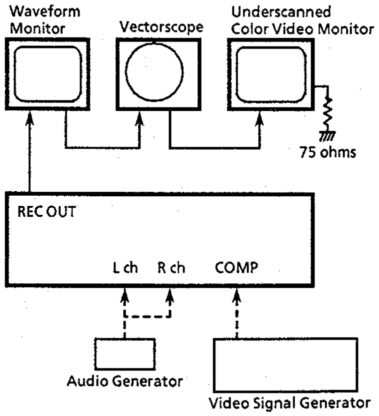

Waveform Monitor
Vectorscope
Underscanned Color Video Monitor
75 ohms
REC OUT
L ch
R ch
COMP
Audio Generator
Video Signal Generator

Fig. 3-1

4. Adjustment Procedure

- Refer to the LOCATIONS OF TEST POINTS AND ADJUSTING CONTROLS FOR ADJUSTMENT

(1) +5V Adjustment

Test Point :	**TP1 (+5V)**	**Main Board**
Adjustment :	**VR1 (+5V ADJ.)**	**Power Board**
M.Equipment:	**Digital Voltmeter**	
Input Signal:	**None**	

- Do not connect any equipment to input jack of this unit.
- Connect the digital voltmeter to TP1 (+5V) on the main board.
- Adjust VR1 (+5V ADJ.) on the power board so that voltage becomes +5.0V ± 0.02V.

(2) FSC (Sub Carrier Frequency) Adjustment

Test Point :	**TP2 (FSC)**	**Main Board**
Adjustment :	**VR800 (FSC ADJ.)**	**Main Board**
M.Equipment:	**Frequency Counter**	
Input Signal:	**None**	

- Do not connect any equipment to input jack of this unit.
- Connect the frequency counter to TP2 (FSC) on the main board.
- Adjust VR800 (FSC ADJ.) on the main board so that frequency becomes 4.433619MHz ± 5Hz.

(3) Read VCO (Read Voltage Controlled Oscillator) Adjustment

Test Point :	**TP580 (READ VCO)**	**Main Board**
Adjustment :	**L581 (READ VCO ADJ.)**	**Main Board**
M.Equipment:	**Digital Voltmeter**	
Input signal:	**None**	

- Do not connect any equipment to input jack of this unit.
- Connect the digital voltmeter to TP580 (READ VCO) on the main board.
- Adjust L581 (READ VCO ADJ.) on the main board so that voltage becomes 2.8V ± 0.1V.

(4) Write VCO (Write Voltage Controlled Oscillator) Adjustment

Test Points:	**TP600 (WRITE A VCO)**	**Main Board**
	TP700 (WRITE B VCO)	**Main Board**
Adjustments:	**L602 (WRITE A VCO ADJ.)**	**Main Board**
	L702 (WRITE B VCO ADJ.)	**Main Board**
M.Equipment:	**Digital Voltmeter**	
Input Signal:	**Color Bar Signal**	

- Connect the video signal generator to source 1 composite video signal input jack (SOURCE 1 COMP.) and supply the color bar signal.
- Press the A-BUS button of SOURCE 1.
- Set the MIX/WIPE CONTROL to A-BUS position (Upper side).
- Connect the digital voltmeter to TP600 (WRITE A VCO) on the main board.
- Adjust L602 (WRITE A VCO ADJ.) on the main board so that voltage becomes 2.8V ± 0.1V.

- Connect the video signal generator to source 2 composite video signal input jack (SOURCE 2 COMP.) and supply the color bar signal.
- Press the B-BUS button of SOURCE 2.
- Set the MIX/WIPE CONTROL to B-BUS position(Lower side).
- Connect the digital voltmeter to TP700 (WRITE B VCO) on the main board.
- Adjust L702 (WRITE B VCO ADJ.) on the main board so that voltage becomes 2.8V ± 0.1V.

(5) REC OUT Y Gain Adjustment

Test Point :	**REC OUT 1 COMP.Jack**	**Rear Panel**
Adjustment :	**VR19 (REC OUT Y ADJ.)**	**Main Board**
M.Equipment:	**Waveform Monitor**	
Input Signal:	**None**	

- Do not connect any equipment to input jack of this unit.
- Turn the power switch of this unit to turned "ON" while pressing the "A" and "B" buttons of "SUPERIMPOSE EFFECT" section to set the <TEST MODE 1>.
- While observing waveform monitor, Adjust VR19 (REC OUT Y GAIN) on the main board so that white level of internal color bar signal becomes 700mV ±14mV.

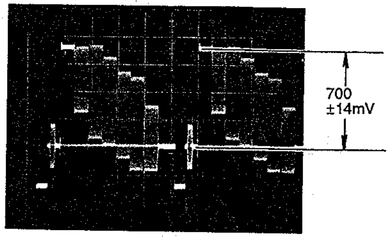


Fig. 4-1

(6) REC OUT C Gain Adjustment

Test Point :	**REC OUT 1 COMP.Jack**	**Rear Panel**
Adjustment :	**VR20 (REC OUT C ADJ.)**	**Main Board**
M.Equipment:	**Waveform Monitor**	
Input Signal:	**None**	

- Keep the <TEST MODE 1>.
- While observing waveform monitor, adjust VR20 (REC OUT C GAIN) on the main board so that burst level of internal color bar signal becomes 0.3V.

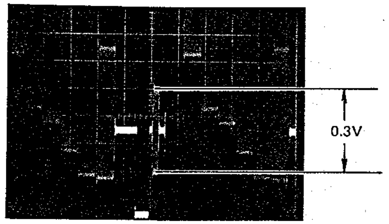


Fig. 4-2

(7) F VCXO Adjustment

Test Points:	**TP100 (Ach F VCXO)**	**Main Board**
	TP200 (Bch F VCXO)	**Main Board**
Adjustments:	**CT100 (Ach F VCXO ADJ.)**	**Main Board**
	CT200 (Bch F VCXO ADJ.)	**Main Board**
M.Equipment:	**Frequency Counter**	
Input Signal:	**None**	

- Turned OFF the power of this unit to exit the <TEST MODE 1> and turned ON the power of this unit again.
- Do not connect the equipment to input jack of this unit.
- Connect the frequency counter to TP100 (Ach F VCXO) on the main board.
- Adjust CT100 (Ach F VCXO ADJ.) on the main board so that frequency becomes 4.433619MHz ± 10Hz.

- Connect the frequency counter to TP200(Bch F VCXO) on the main board.
- Adjust CT200 (Bch F VCXO ADJ.) on the main board so that frequency becomes 4.433619MHz ± 10Hz.

(8) BGP (Burst Gate Pulse) Width Adjustment

Test Points:	**TP101 (Ach BGP)**	**Main Board**
	TP201 (Bch BGP)	**Main Board**
Adjustments:	**VR100 (Ach BGP ADJ.)**	**Main Board**
	VR200 (Bch BGP ADJ.)	**Main Board**
M.Equipment:	**Oscilloscope**	
Input Signal:	**Color Bar Signal**	

- Connect the video signal generator to source 1 composite video signal input jack (SOURCE 1 COMP.) and supply the color bar signal.
- Press the A-BUS button of SOURCE 1.
- Set the WIPE/MIX CONTROL to A-BUS position (Upper side).
- Connect the oscilloscope to TP3 for trigger and TP101 (Ach BGP).
- Trigger the oscilloscope to TP3, and set the oscilloscope to H rate then expand the horizontal blanking period.
- Adjust VR100 (Ach BGP ADJ.) on the main board so that pulse width becomes 7.8µsec ± 0.1µsec.

- Connect the video signal generator to source 2 composite video signal input jack (SOURCE 2 COMP.) and supply the color bar signal.
- Press the B-BUS button of SOURCE 2.
- Set the WIPE/MIX CONTROL to B-BUS position (Lower side).
- Connect the oscilloscope to TP3 for trigger and TP201 (Bch BGP).
- Trigger the oscilloscope to TP3, and set the oscilloscope to H rate then expand the horizontal blanking period.
- Adjust VR200 (Bch BGP ADJ.) on the main board so that pulse width becomes 7.8µsec ± 0.1µsec.

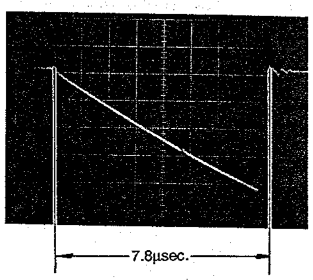


Fig. 4-3

(9) Carrier Balance Adjustment

Test Point :	**REC OUT 1 COMP.Jack**	**Rear Panel**
Adjustments:	**VR302 (Ach Carrier Bal.)**	**Main Board**
	VR304 (Ach Carrier Bal.)	**Main Board**
	VR301 (Bch Carrier Bal.)	**Main Board**
	VR303 (Bch Carrier Bal.)	**Main Board**
M.Equipment:	**Vectorscope & Waveform Monitor**	
Input Signal:	**Color Bar Signal**	

- Connect the video signal generator to source 1 composite video signal input jack (SOURCE 1 COMP.) and supply the color bar signal.

- Press the A-BUS button of SOURCE 1.
- Set the WIPE/MIX CONTROL to A-BUS position (Upper side).
- Set the GAIN control of vectorscope to maximum.
- While observing vectorscope and waveform monitor, adjust VR302 and VR304 on the main board so that the vector position becomes on the center on the vectorscope and the carrier leaks of the video signal becomes minimum on the waveform monitor.

- Connect the video signal generator to source 2 composite video signal input jack (SOURCE 2 COMP.) and supply the color bar signal.
- Press the B-BUS button of SOURCE 2.
- Set the WIPE/MIX CONTROL to B-BUS position(Lower side).
- Set the GAIN control of vectorscope to maximum.
- While observing vectorscope and waveform monitor, adjust VR301 and VR303 on the main board so that the vector position becomes on the center on the vectorscope and the carrier leaks of the video signal becomes minimum on the waveform monitor.

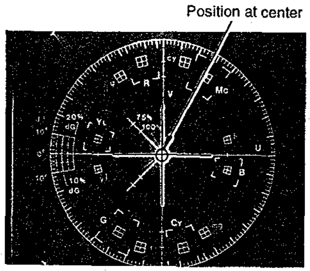


Fig. 4-4

(10) Pedestal Adjustment

Test Point :	**REC OUT 1 COMP.Jack**	**Rear Panel**
Adjustments:	**VR306 (Ach PEDESTAL)**	**Main Board**
	VR305 (Bch PEDESTAL)	**Main Board**
M.Equipment:	**Waveform Monitor**	
Input Signal:	**Ramp Signal**	

- Connect the video signal generator to source 1 composite video signal input jack (SOURCE 1 COMP.) and supply the ramp signal.
- Press the A-BUS button of SOURCE 1.
- Set the WIPE/MIX CONTROL to A-BUS position (Upper side).
- While observing waveform monitor, adjust VR306 on the main board so that pedestal level becomes 0V +17mV/-0mV.

- Connect the video signal generator to source 2 composite video signal input jack (SOURCE 2 COMP.) and supply the ramp signal.
- Press the B-BUS button of SOURCE 2.
- Set the WIPE/MIX CONTROL to B-BUS position (Lower side).
- While observing waveform monitor, adjust VR305 on the main board so that pedestal level becomes 0V +17mV/-0mV.

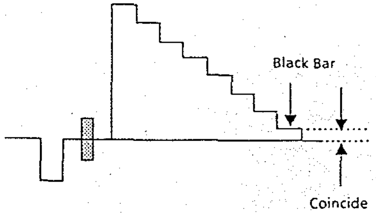


Fig. 4-5

(11) Y Gain Adjustment

Test Point :	**REC OUT 1 COMP.Jack**	**Rear Panel**
Adjustments:	**VR120 (Ach Y GAIN ADJ.)**	**Main Board**
	VR220 (Bch Y GAIN ADJ.)	**Main Board**
M.Equipment:	**Waveform Monitor**	
Input Signal:	**Color Bar Signal**	

- Connect the video signal generator to source 1 composite video signal input jack (SOURCE 1 COMP.) and supply the color bar signal.
- Press the A-BUS button of SOURCE 1.
- Set the WIPE/MIX CONTROL to A-BUS position (Upper side).
- While observing waveform monitor, adjust VR120 (Ach Y GAIN) on the main board so that white level of video signal becomes 700mV ± 21mV.

- Connect the video signal generator to source 2 composite video signal input jack (SOURCE 2 COMP.) and supply the color bar signal.
- Press the B-BUS button of SOURCE 2.
- Set the WIPE/MIX CONTROL to B-BUS position (Lower side).
- While observing waveform monitor, adjust VR220 (Bch Y GAIN) on the main board so that white level of video signal becomes 700mV ± 21mV.

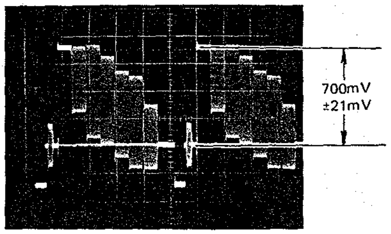


Fig. 4-6

(12) Chroma Phase and Gain Adjustment

Test Point : REC OUT 1 COMP.Jack Rear Panel
Adjustments: VR101 (Ach C GAIN) Main Board
VR102 (Ach C PHASE) Main Board
VR201 (Bch C GAIN) Main Board
VR202 (Bch C PHASE) Main Board
M.Equipment:Vectorscope
Input Signal: Color Bar Signal

- Connect the video signal generator to source 1 composite video signal input jack (SOURCE 1 COMP.) and supply the color bar signal.
- Press the A-BUS button of SOURCE 1.
- Set the WIPE/MIX CONTROL to A-BUS position (Upper side).
- While observing vectorscope, adjust VR101 (Ach CHROMA GAIN) and VR102 (Ach CHROMA PHASE) so that each color vector are into their respective box.

- Connect the video signal generator to source 2 composite video signal input jack (SOURCE 2 COMP.) and supply the color bar signal.
- Press the B-BUS button of SOURCE 2.
- Set the WIPE/MIX CONTROL to B-BUS position (Lower side).
- While observing vectorscope, adjust VR201 (Bch CHROMA GAIN) and VR202 (Bch CHROMA PHASE) so that each color vector are into their respective box.

- Set the wipe mode to horizontal wipe (Press CORNER WIPE Button once.).
- Set the WIPE/MIX CONTROL to center position.
- Readjust the VR101 (Ach CHROMA GAIN) and VR201 (Bch CHROMA GAIN) so that difference of chroma gain becomes within 3% (Level of Ach- Level of Bch = 3%).
- Readjust the VR102 (Ach CHROMA PHASE) and VR202 (Bch CHROMA PHASE) so that difference of chroma phase becomes within 3° (Phase of Ach - Phase of Bch = 3°).

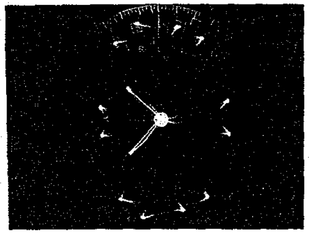


Fig. 4-7

(13) Ach/Bch H Phase Adjustment

Test Point : REC OUT 1 COMP.Jack Rear Panel
Adjustment : VR110 (H PHASE) Main Board
M.Equipment:Waveform Monitor
Input Signal: Cross Hatch Pattern Signal

- Connect the video signal generator to source 1 composite video signal input jack (SOURCE 1 COMP.) and to source 2 composite video signal input jack (SOURCE 2 COMP.).
- Supply the cross hatch pattern signal to each input jack.
- Press the A-BUS button of SOURCE 1 and the B-BUS button of SOURCE 2.
- Keep the wipe mode of horizontal wipe.
- Set the waveform monitor to 1H/MAG mode.
- Adjust VR110 so that difference of horizontal phase of Ach and Bch becomes coincides.

(14) Audio Output Level Adjustment

Test Point : ---
Adjustments: VR6 (Audio Lch) Switch Board
VR7 (Audio Rch) Switch Board
M.Equipment:---
Input signal: Audio Signal

- Connect the audio signal generator to Lch (MONO) of source 1 audio input jack (SOURCE 1 AUDIO) and supply the audio signal (1kHz, -12dBs).
- Set the fader of "AUDIO MIX" section as follows.

SOURCE 1 FADER :	MAXIMUM
SOURCE 2 FADER :	MINIMUM
AUX FADER :	MINIMUM
MIC FADER :	MINIMUM

- Adjust VR6 (Audio Lch) so that 0dB of R channel level indicator becomes turned ON and +2dB of level indicator just turned OFF.

- Connect the audio signal generator to Rch of source 1 audio input jack (SOURCE 1 AUDIO) and supply the audio signal (1kHz, -12dBs).

- Adjust VR7 (Audio Rch) so that 0dB of L channel level indicator becomes turned ON and +2dB of level indicator just turned OFF.

5.Test mode

- The built-in 2 types of <TEST MODE> is helpful to check the LED, contact of operation switches (buttons) and controls.

5-1.Test mode 1 (LED/Switch Test)

1. Turn the power of this unit while pressing the "A" and "B" buttons of "SUPERIMPOSE" section to enter the <TEST MODE 1>.
2. The LEDs of Wipe Mode (WIPE MODE), Digital Effect (DIGITAL EFFECT) and Superimpose (SUPERIMPOSE EFFECT) sections are lit.
3. Push the corresponding button or switch and confirm that LED goes OFF. Also push the Back Color Selection Buttons (BACK COL. SELECT) to check the contact of each buttons.
4. When the above confirmation is finished, the LEDs of Positioner/Color Correction (POSITION/COL.SELECT) and Mix Wipe Effect/Fade Control (MIX WIPE EFFECT/FADE CONTROL) Sections are lit.
5. Push corresponding button and confirm that LED goes OFF.
6. When the TEST MODE 1 is completed, the TEST MODE automatically changed to TEST MODE 2.

Note : the color bar signal is obtained at REC OUTPUT connectors during TEST MODE 1.

5-2.Test mode 2 (CONTROL/Volume TEST)

1. In the TEST MODE 2, following LEDs are blinking to check the CONTROLS (Volumes).

Blinking LED	CONTROL to be checked
EXT/LUM	KEY LEVEL
POSITION/COL.	Chroma
COL.CORRECT A	POSITION-Y
COL.CORRECT B	POSITION-X
AUTO TAKE	MIX/WIPE LEVER
EXT.CAMERA	SUPERIMPOSE KEY LEVEL
AUTO FADE	TIME

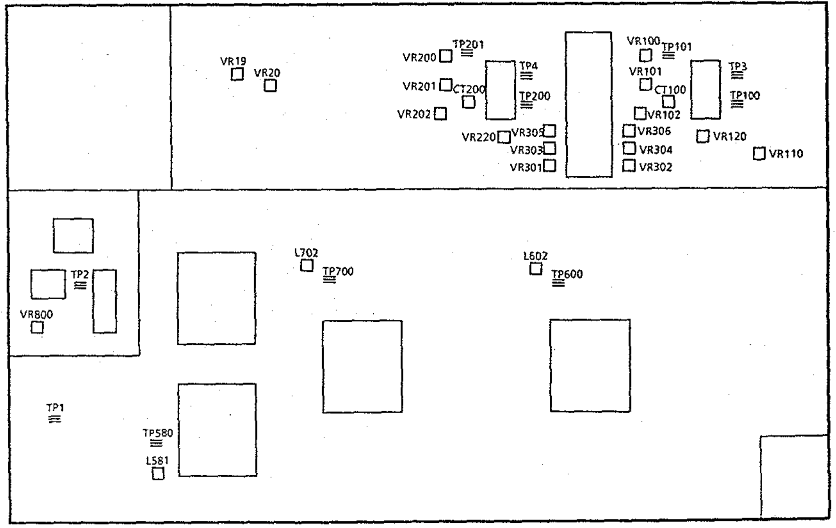
2. Turn or move the each CONTROL to clockwise or counterclockwise, or move to upwards or downwards. While observing monitor, line of level indicator moves from bottom to top or top to bottom to show the position contact of each controls.

Note : When push the blinking button before checking the control, the <TEST MODE 2> can not be performed correctly.

3. when the <TEST MODE 2> is completed turn OFF the power switch of this unit.

LOCATION OF TEST POINT AND ADJUSTING CONTROLS

MAIN BOARD



APPEARANCE OF IC, TRANSISTOR AND DIODE

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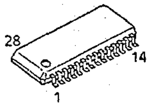

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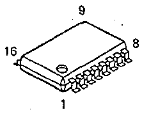

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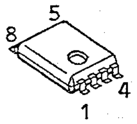

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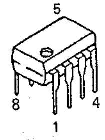

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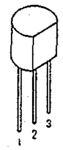

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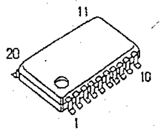

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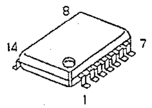

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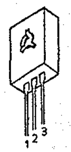

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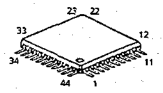
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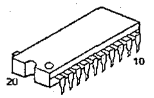

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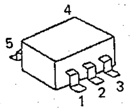

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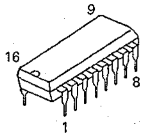

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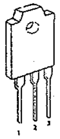

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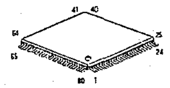

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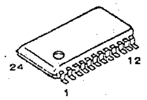

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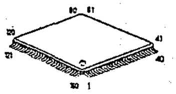

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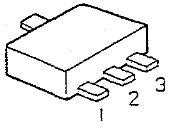

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2. GNB
3. Out

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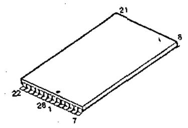

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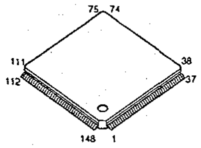
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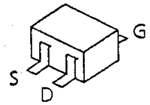

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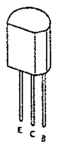

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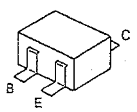

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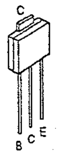

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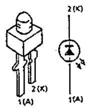

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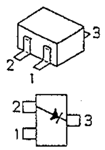

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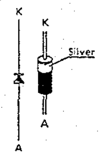
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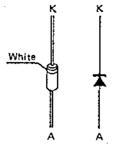

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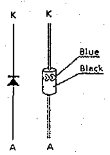
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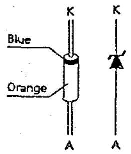
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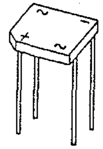

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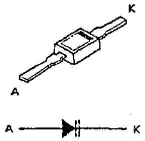

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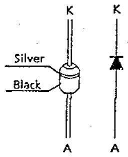
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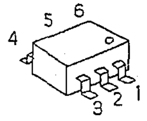

CHIP COMPONENTS

1. Chip Transistor

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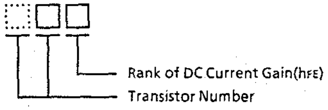


Transistor Number

(Chip Transistor)

Letter	Transistor No.	Letter	Transistor No.
A	2SB709	X	2SD602A
B	2SB709A	Y	2SD601
C	2SB710	Z	2SD601A
D	2SB710A	1A	2SB799
E	2SA1022	1B	2SB814
F	2SA1034	1C	2SB902
H	2SA1035	1F	2SK321
I	2SB792	1K	2SK316
K	2SC2778	1L	2SK247
P	2SD814	1M	2SJ84
Q	2SD813	1N	2SK199
R	2SC2480	1O	2SK198
S	2SC2405	1T	2SC3077
T	2SC2406	1X	2SC2845
U	2SC2404	1Z	2SD1030
V	2SC2295	2B	2SK374
W	2SD602	2C	2SK116

(Small Chip Transistor)

Letter	Transistor No.
A	2SB1218
U	2SC3931
W	2SD1820
Y	2SD1819
E3	2SA1226
OS	2SB1219
UC	2SA1532
YU	2SC3938

(Pair Transistor)

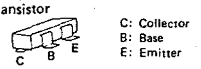
Letter	Transistor No.
5C	XN4601
5N	XN6501
5O	XN6401

Example :

WQ ——→ 2SD602 - Q
YQ ——→ 2SD601 - Q
1BS ——→ 2SB814 - S

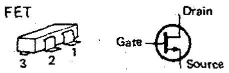
Appearance and Symbols

Transistor



C: Collector
B: Base
E: Emitter

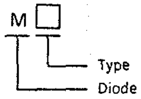
FET



	1	2	3
Except 2SK199	Drain	Source	Gate
2SK199	Gate	Drain	Source

2. Chip Diode

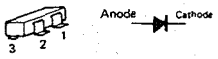
The diode number is indicated on the top surface of the chip diode using Two alphabet letters.



Diode Number

Letter	Diode No.	Letter	Diode No.
MA	MA151A	MI	MA152K
MB	MA152A	MK	MA28W-B
MC	MA153	ML	MA28T-A
MD	MA28-A	MN	MA151WA
ME	MA28-B	MO	MA152WA
MF	MA28W-A	MT	MA151WK
MH	MA151K	MU	MA152WK

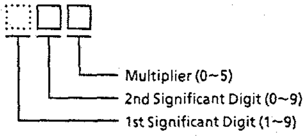
Appearance and Symbols



	1	2	3
MA28/MA28W/MA28T	-	Anode	Cathode
MA151K/MA152K	-	Anode	Cathode
MA151A/MA152A	-	Cathode	Anode
MA151WK/MA152WK	Anode	Anode	Cathode
MA151WA/MA152WA	Cathode	Cathode	Anode
MA153	Cathode	Anode	Common

3. Chip Resistor

The resistor value is indicated on the bottom surface of the chip resistor using three digit numbers.



Example :

330 ——→ $33 \times 10^0 = 33$ ohms
561 ——→ $56 \times 10^1 = 560$ ohms
123 ——→ $12 \times 10^3 = 12$ ohms

Note : Zero ohm resistor (jumper chip) is colored red or green.

4. Chip Capacitor

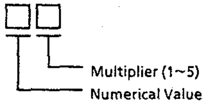
The capacitive value of replacement chip capacitors is indicated on the bottom surface. Original parts do not have value indication.

If the capacitive value is less than 100 pF, the value will be indicated by one or two digit number expressing the capacity directly in pF.

Example :

0.5 ——→	0.5 pF	2.5 ——→	2.5 pF
75 ——→	0.75 pF	33 ——→	33 pF
1 ——→	1 pF	82 ——→	82 pF

If the capacitive value is 100 pF or greater, the value will be indicated by an alpha-numeric code. The letter precedes the number and expresses a numerical value to be multiplied by the number which follows.



Numerical Value

Letter	Value	Letter	Value
A	10	N	33
B	11	P	36
C	12	O	39
D	13	R	43
E	15	S	47
F	16	T	51
G	18	U	56
H	20	V	62
J	22	W	68
K	24	X	75
L	27	Y	82
M	30	Z	91

*Letters I and O are not used

Example :

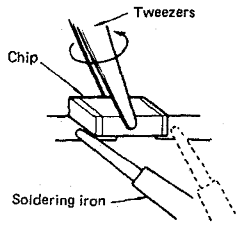
A1 ——→ $10 \times 10^1 = 100$ pF
N2 ——→ $33 \times 10^2 = 3300$ pF
S3 ——→ $47 \times 10^3 = 47000$ pF

5. Precautions in replacing the chip component

1. Make sure that the unit is turned OFF when replacing the chip.
2. Use tweezers to prevent any damage to the chip surface.
3. Do not re-use the chips after removal.
4. Do not rub the electrode of chips.
5. Do not subject the chips to excessive stress.
6. It is recommended that a pencil-type soldering iron to be used.
7. The solder whose diameter is less than 0.5 mm is recommended.
8. Do not heat the chip beyond 3 seconds.
9. Maintain temperature control under 260°C (500°F) when soldering.

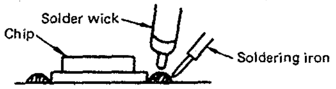
5-1 Removal (Transistor, Diode, Resistor and Capacitor)

1. Add the solder to both ends of the chip (three leads for chip transistor).
2. While attaching the soldering iron to both ends of the chip (three leads for chip transistor) as shown below, remove the chip by turning it with tweezers.
   Note : Be careful not to damage other chips.

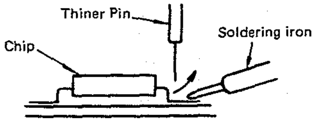


5-2 Removal (IC)

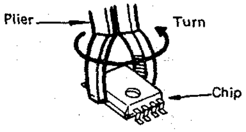
1. Add the solder wick and solder iron to each lead of the IC and remove solder.



2. Add the solder iron to each lead of the IC and left each lead of the IC using thiner pin.

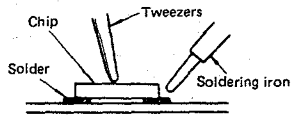


3. Remove IC turning it with plier.

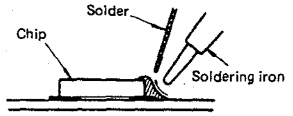


5-3 Mounting

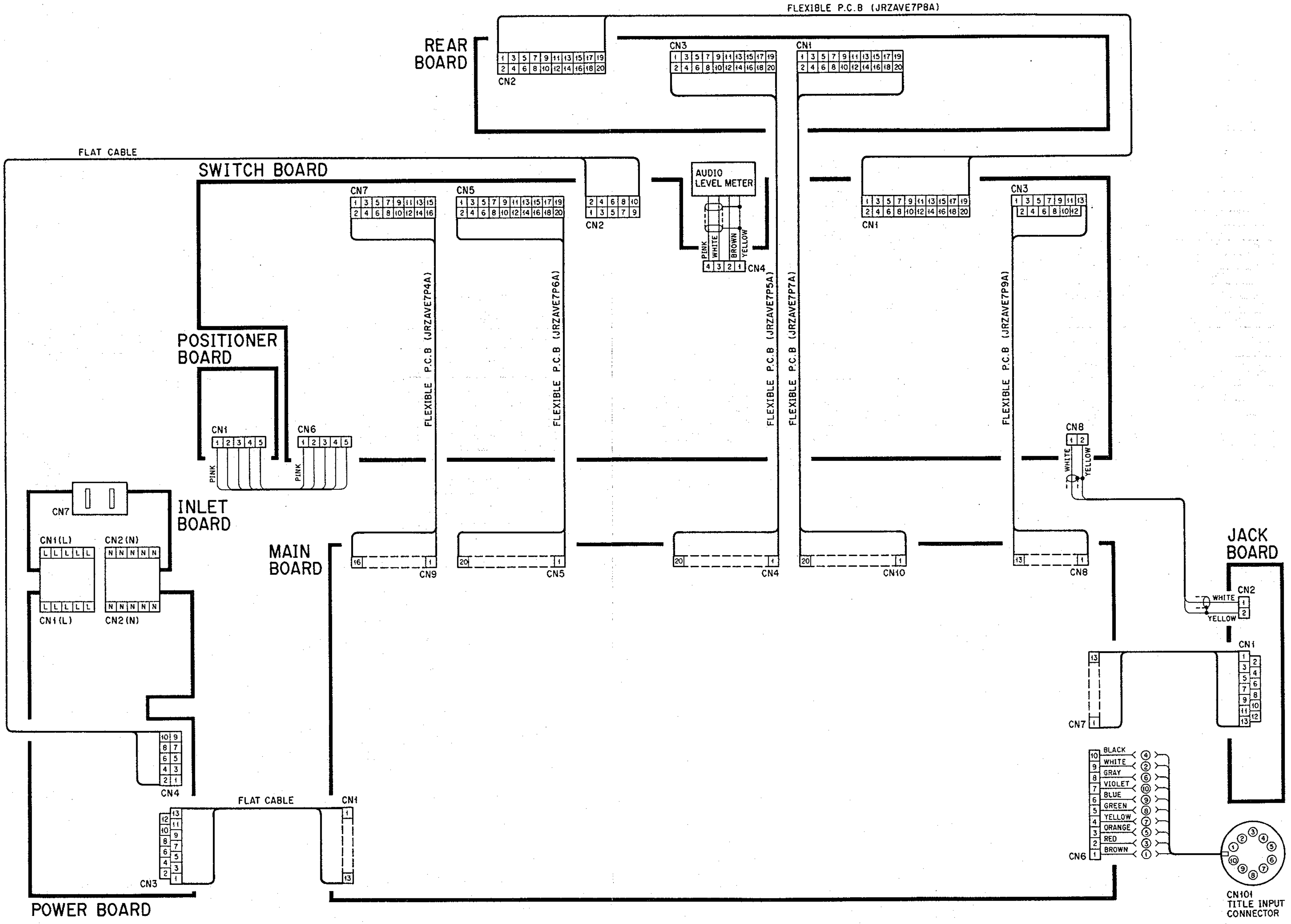
1. Place the solder thinly on the chip mounting foil.
2. Solder the chip temporarily while holding the chip with the tweezers.



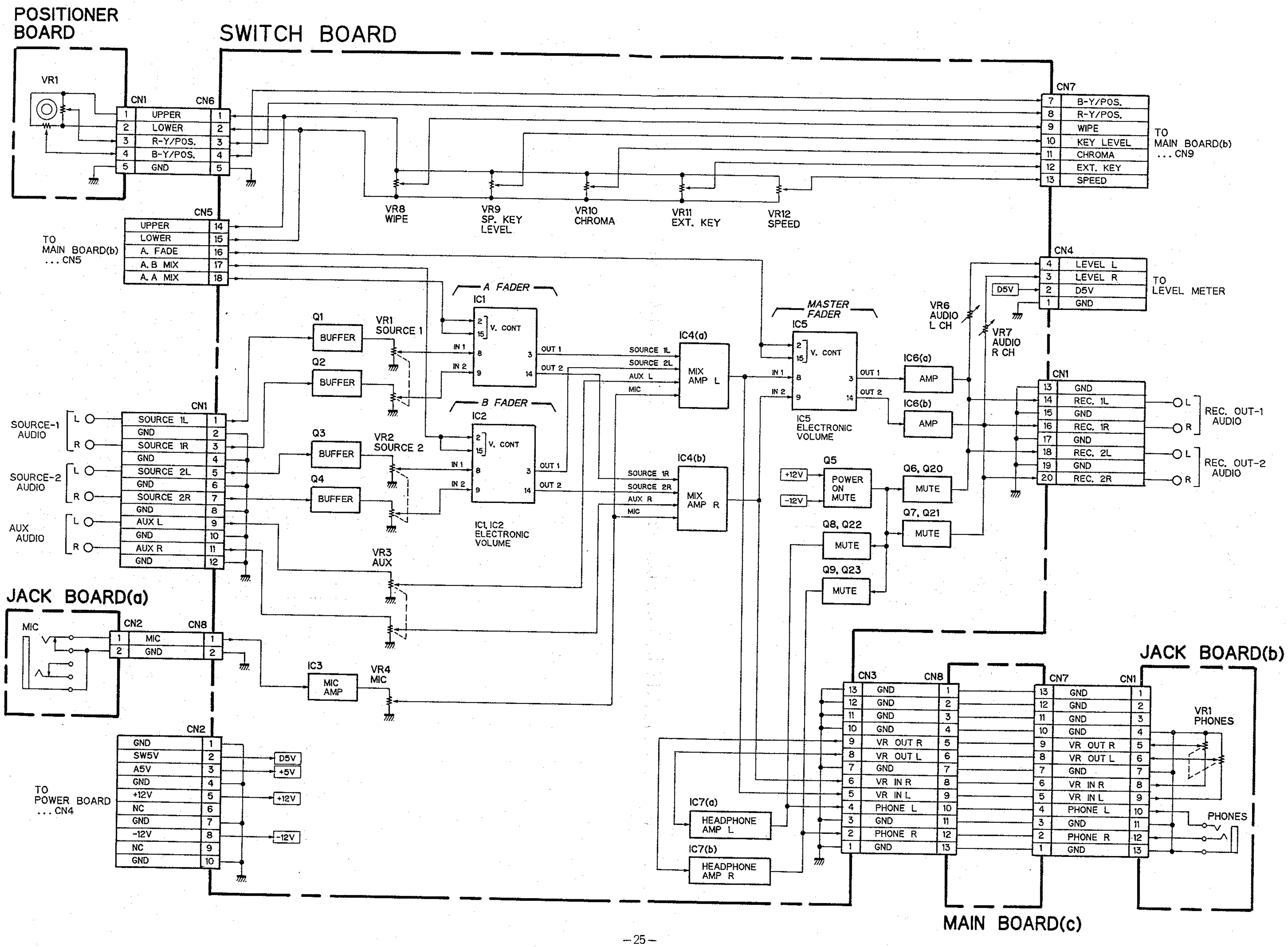
3. Solder both ends of chip (three leads for chip transistor).



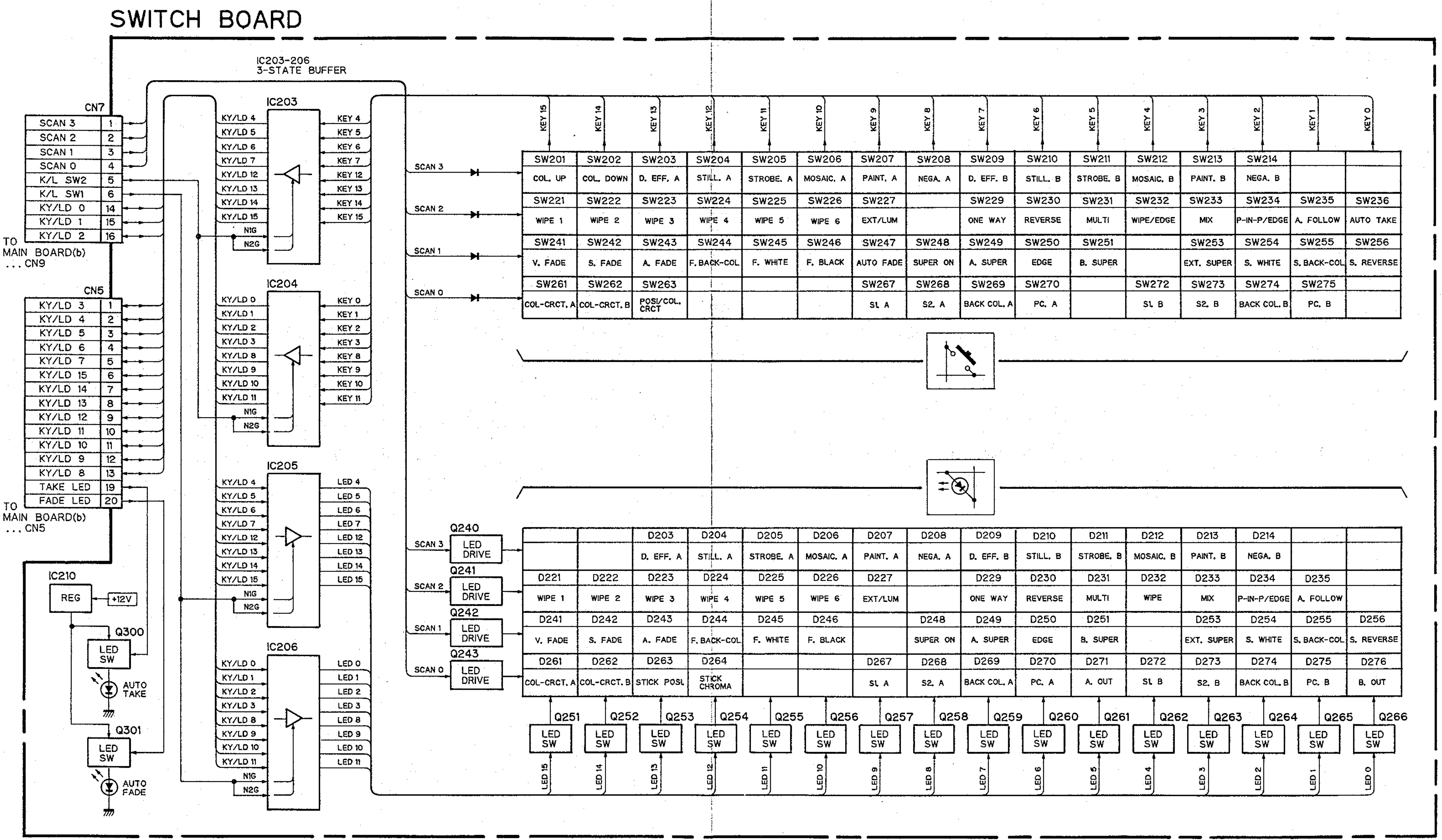
WIRING DIAGRAM


FLEXIBLE P.C.B (JRZAVE7P8A)
REAR BOARD
CN2
CN3
CN1
FLAT CABLE
SWITCH BOARD
CN7
CN5
CN2
AUDIO LEVEL METER
PINK
WHITE
BROWN
YELLOW
CN4
CN1
CN3
FLEXIBLE P.C.B (JRZAVE7P4A)
FLEXIBLE P.C.B (JRZAVE7P6A)
FLEXIBLE P.C.B (JRZAVE7P5A)
FLEXIBLE P.C.B (JRZAVE7P7A)
FLEXIBLE P.C.B (JRZAVE7P9A)
POSITIONER BOARD
CN1
CN6
PINK
PINK
CN8
WHITE
YELLOW
CN7
INLET BOARD
CN1(L)
CN2(N)
CN1(L)
CN2(N)
MAIN BOARD
CN9
CN5
CN4
CN10
CN8
JACK BOARD
CN2
WHITE
YELLOW
CN1
CN7
BLACK
WHITE
GRAY
VIOLET
BLUE
GREEN
YELLOW
ORANGE
RED
BROWN
CN6
CN101
TITLE INPUT CONNECTOR
CN4
FLAT CABLE
CN1
CN3
POWER BOARD

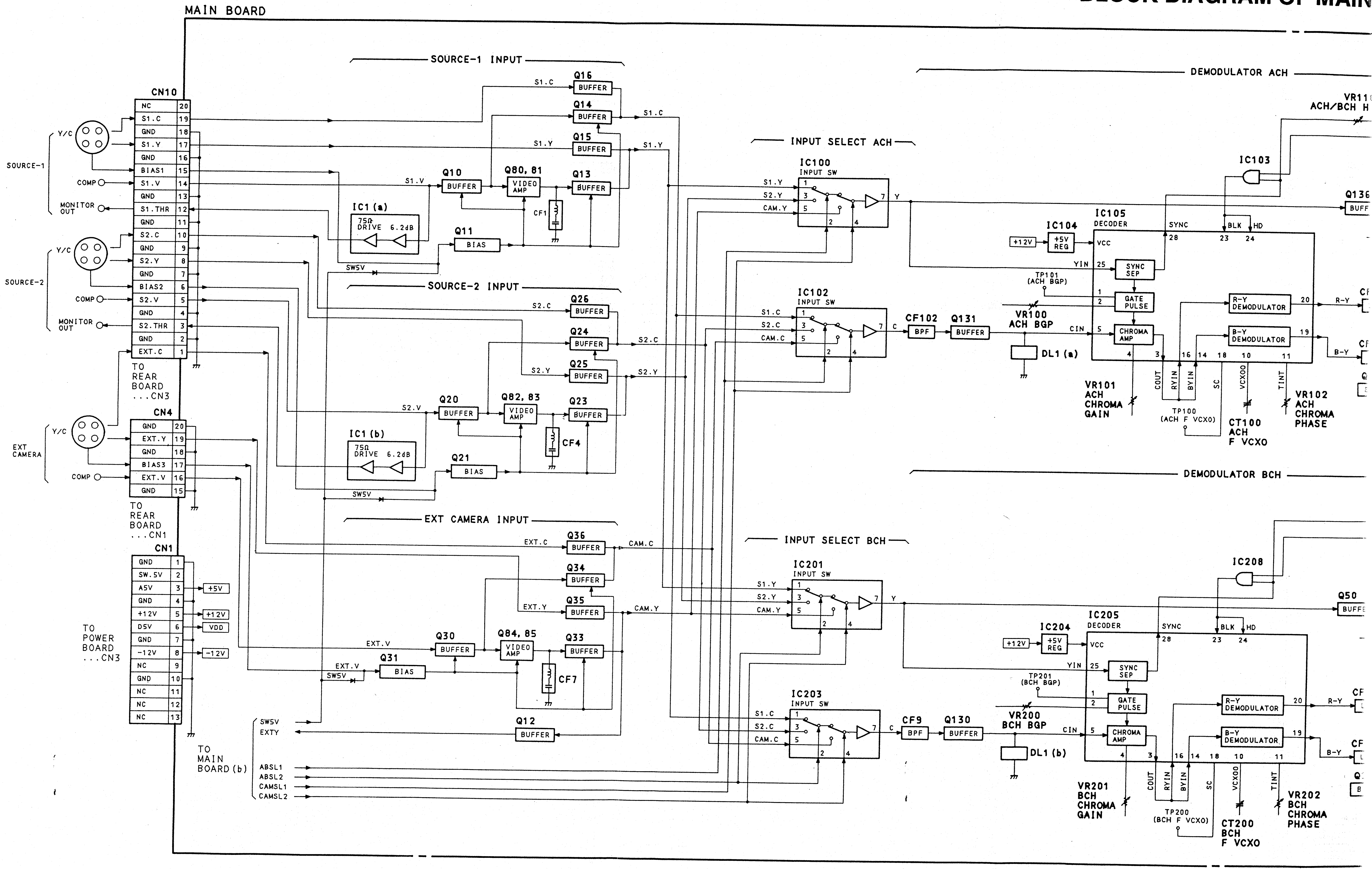
BLOCK DIAGRAM OF SWITCH BOARD (1/2)


POSITIONER BOARD
SWITCH BOARD
VR1
CN1
CN6
1 UPPER 1
2 LOWER 2
3 R-Y/POS. 3
4 B-Y/POS. 4
5 GND 5
CN7
7 B-Y/POS.
8 R-Y/POS.
9 WIPE
10 KEY LEVEL
11 CHROMA
12 EXT. KEY
13 SPEED
TO MAIN BOARD(b) ... CN9
VR8 WIPE
VR9 SP. KEY LEVEL
VR10 CHROMA
VR11 EXT. KEY
VR12 SPEED
CN5
UPPER 14
LOWER 15
A. FADE 16
A. B MIX 17
A. A MIX 18
TO MAIN BOARD(b) ... CN5
CN4
4 LEVEL L
3 LEVEL R
2 D5V
1 GND
D5V
TO LEVEL METER
A FADER
IC1
V. CONT
IN 1
IN 2
OUT 1
OUT 2
B FADER
IC2
IC1, IC2 ELECTRONIC VOLUME
Q1
BUFFER
VR1 SOURCE 1
Q2
BUFFER
Q3
BUFFER
VR2 SOURCE 2
Q4
BUFFER
IC4(a)
SOURCE 1L
SOURCE 2L
AUX L
MIC
MIX AMP L
IC4(b)
SOURCE 1R
SOURCE 2R
AUX R
MIC
MIX AMP R
MASTER FADER
IC5
V. CONT
IN 1
IN 2
OUT 1
OUT 2
IC5 ELECTRONIC VOLUME
VR6 AUDIO L CH
VR7 AUDIO R CH
IC6(a)
AMP
IC6(b)
AMP
CN1
13 GND
14 REC. 1L
15 GND
16 REC. 1R
17 GND
18 REC. 2L
19 GND
20 REC. 2R
REC. OUT-1 AUDIO
REC. OUT-2 AUDIO
L
R
Q5
+12V
-12V
POWER ON MUTE
Q6, Q20
MUTE
Q7, Q21
MUTE
Q8, Q22
MUTE
Q9, Q23
MUTE
SOURCE-1 AUDIO
SOURCE-2 AUDIO
AUX AUDIO
CN1
SOURCE 1L 1
GND 2
SOURCE 1R 3
GND 4
SOURCE 2L 5
GND 6
SOURCE 2R 7
GND 8
AUX L 9
GND 10
AUX R 11
GND 12
VR3 AUX
JACK BOARD(a)
MIC
CN2
CN8
1 MIC 1
2 GND 2
IC3
MIC AMP
VR4 MIC
CN2
GND 1
SW5V 2
A5V 3
GND 4
+12V 5
NC 6
GND 7
-12V 8
NC 9
GND 10
D5V
+5V
+12V
-12V
TO POWER BOARD ... CN4
JACK BOARD(b)
CN3
CN8
13 GND 1
12 GND 2
11 GND 3
10 GND 4
9 VR OUT R 5
8 VR OUT L 6
7 GND 7
6 VR IN R 8
5 VR IN L 9
4 PHONE L 10
3 GND 11
2 PHONE R 12
1 GND 13
CN7
CN1
13 GND 1
12 GND 2
11 GND 3
10 GND 4
9 VR OUT R 5
8 VR OUT L 6
7 GND 7
6 VR IN R 8
5 VR IN L 9
4 PHONE L 10
3 GND 11
2 PHONE R 12
1 GND 13
VR1 PHONES
PHONES
IC7(a)
HEADPHONE AMP L
IC7(b)
HEADPHONE AMP R
MAIN BOARD(c)

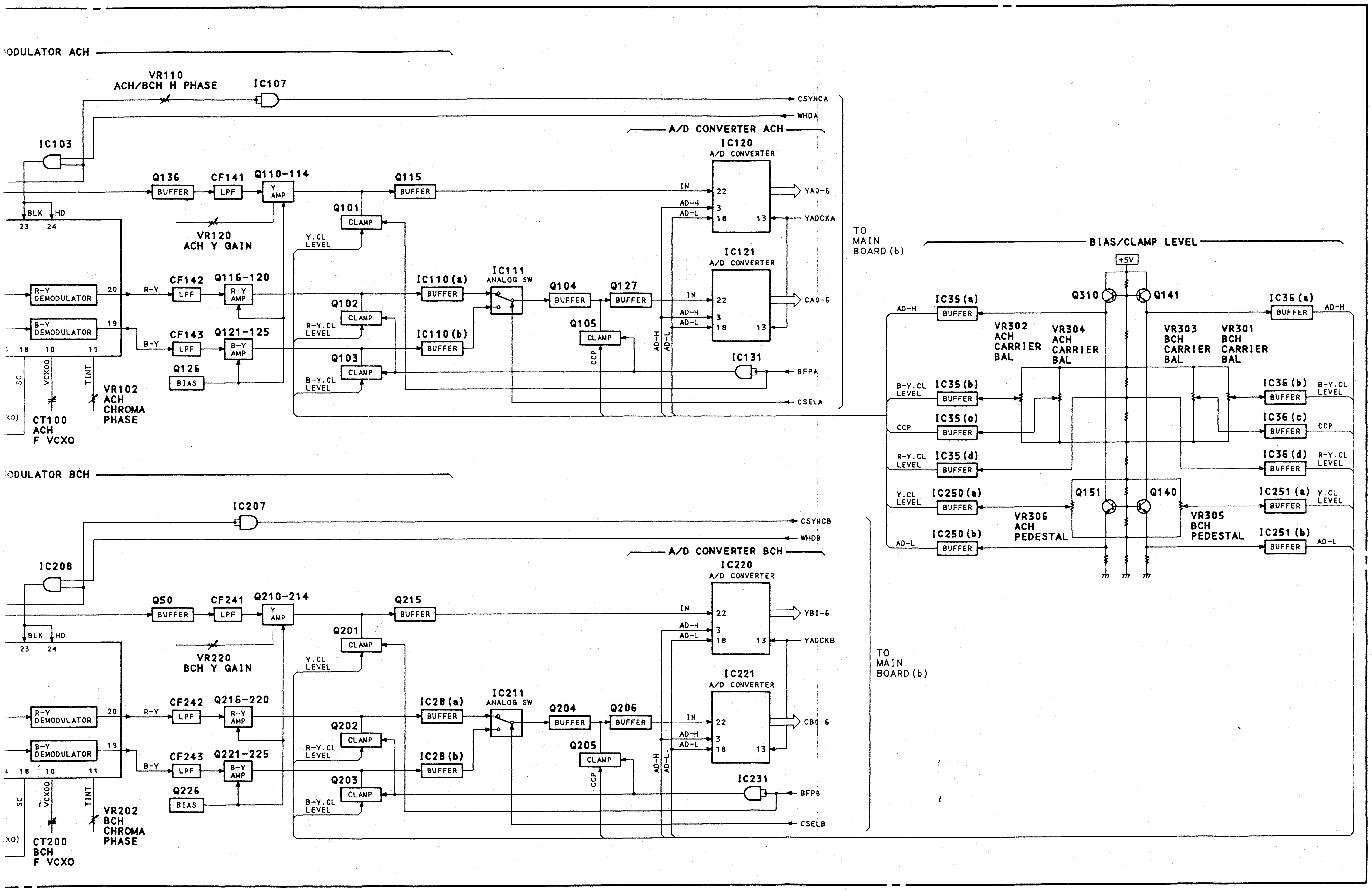
BLOCK DIAGRAM OF SWITCH BOARD (2/2)


SWITCH BOARD
IC203-206
3-STATE BUFFER
CN7
SCAN 3 1
SCAN 2 2
SCAN 1 3
SCAN 0 4
K/L SW2 5
K/L SW1 6
KY/LD 0 14
KY/LD 1 15
KY/LD 2 16
TO MAIN BOARD(b) ... CN9
CN5
KY/LD 3 1
KY/LD 4 2
KY/LD 5 3
KY/LD 6 4
KY/LD 7 5
KY/LD 15 6
KY/LD 14 7
KY/LD 13 8
KY/LD 12 9
KY/LD 11 10
KY/LD 10 11
KY/LD 9 12
KY/LD 8 13
TAKE LED 19
FADE LED 20
TO MAIN BOARD(b) ... CN5
IC203
KY/LD 4 KY/LD 5 KY/LD 6 KY/LD 7 KY/LD 12 KY/LD 13 KY/LD 14 KY/LD 15 N1G N2G
KEY 4 KEY 5 KEY 6 KEY 7 KEY 12 KEY 13 KEY 14 KEY 15
IC204
KY/LD 0 KY/LD 1 KY/LD 2 KY/LD 3 KY/LD 8 KY/LD 9 KY/LD 10 KY/LD 11 N1G N2G
KEY 0 KEY 1 KEY 2 KEY 3 KEY 8 KEY 9 KEY 10 KEY 11
IC205
KY/LD 4 KY/LD 5 KY/LD 6 KY/LD 7 KY/LD 12 KY/LD 13 KY/LD 14 KY/LD 15 N1G N2G
LED 4 LED 5 LED 6 LED 7 LED 12 LED 13 LED 14 LED 15
IC206
KY/LD 0 KY/LD 1 KY/LD 2 KY/LD 3 KY/LD 8 KY/LD 9 KY/LD 10 KY/LD 11 N1G N2G
LED 0 LED 1 LED 2 LED 3 LED 8 LED 9 LED 10 LED 11
IC210
REG
+12V
Q300
LED SW
AUTO TAKE
Q301
LED SW
AUTO FADE
SCAN 3
SCAN 2
SCAN 1
SCAN 0
KEY 15 KEY 14 KEY 13 KEY 12 KEY 11 KEY 10 KEY 9 KEY 8 KEY 7 KEY 6 KEY 5 KEY 4 KEY 3 KEY 2 KEY 1 KEY 0
SW201 COL. UP
SW202 COL. DOWN
SW203 D. EFF. A
SW204 STILL. A
SW205 STROBE. A
SW206 MOSAIC. A
SW207 PAINT. A
SW208 NEGA. A
SW209 D. EFF. B
SW210 STILL. B
SW211 STROBE. B
SW212 MOSAIC. B
SW213 PAINT. B
SW214 NEGA. B
SW221 WIPE 1
SW222 WIPE 2
SW223 WIPE 3
SW224 WIPE 4
SW225 WIPE 5
SW226 WIPE 6
SW227 EXT/LUM
SW229 ONE WAY
SW230 REVERSE
SW231 MULTI
SW232 WIPE/EDGE
SW233 MIX
SW234 P-IN-P/EDGE
SW235 A. FOLLOW
SW236 AUTO TAKE
SW241 V. FADE
SW242 S. FADE
SW243 A. FADE
SW244 F. BACK-COL
SW245 F. WHITE
SW246 F. BLACK
SW247 AUTO FADE
SW248 SUPER ON
SW249 A. SUPER
SW250 EDGE
SW251 B. SUPER
SW253 EXT. SUPER
SW254 S. WHITE
SW255 S. BACK-COL
SW256 S. REVERSE
SW261 COL-CRCT. A
SW262 COL-CRCT. B
SW263 POSI/COL. CRCT
SW267 S1. A
SW268 S2. A
SW269 BACK COL. A
SW270 PC. A
SW272 S1. B
SW273 S2. B
SW274 BACK COL. B
SW275 PC. B
Q240 LED DRIVE
Q241 LED DRIVE
Q242 LED DRIVE
Q243 LED DRIVE
D203 D. EFF. A
D204 STILL. A
D205 STROBE. A
D206 MOSAIC. A
D207 PAINT. A
D208 NEGA. A
D209 D. EFF. B
D210 STILL. B
D211 STROBE. B
D212 MOSAIC. B
D213 PAINT. B
D214 NEGA. B
D221 WIPE 1
D222 WIPE 2
D223 WIPE 3
D224 WIPE 4
D225 WIPE 5
D226 WIPE 6
D227 EXT/LUM
D229 ONE WAY
D230 REVERSE
D231 MULTI
D232 WIPE
D233 MIX
D234 P-IN-P/EDGE
D235 A. FOLLOW
D241 V. FADE
D242 S. FADE
D243 A. FADE
D244 F. BACK-COL
D245 F. WHITE
D246 F. BLACK
D248 SUPER ON
D249 A. SUPER
D250 EDGE
D251 B. SUPER
D253 EXT. SUPER
D254 S. WHITE
D255 S. BACK-COL
D256 S. REVERSE
D261 COL-CRCT. A
D262 COL-CRCT. B
D263 STICK POSI.
D264 STICK CHROMA
D267 S1. A
D268 S2. A
D269 BACK COL. A
D270 PC. A
D271 A. OUT
D272 S1. B
D273 S2. B
D274 BACK COL. B
D275 PC. B
D276 B. OUT
Q251 Q252 Q253 Q254 Q255 Q256 Q257 Q258 Q259 Q260 Q261 Q262 Q263 Q264 Q265 Q266
LED SW
LED 15 LED 14 LED 13 LED 12 LED 11 LED 10 LED 9 LED 8 LED 7 LED 6 LED 5 LED 4 LED 3 LED 2 LED 1 LED 0

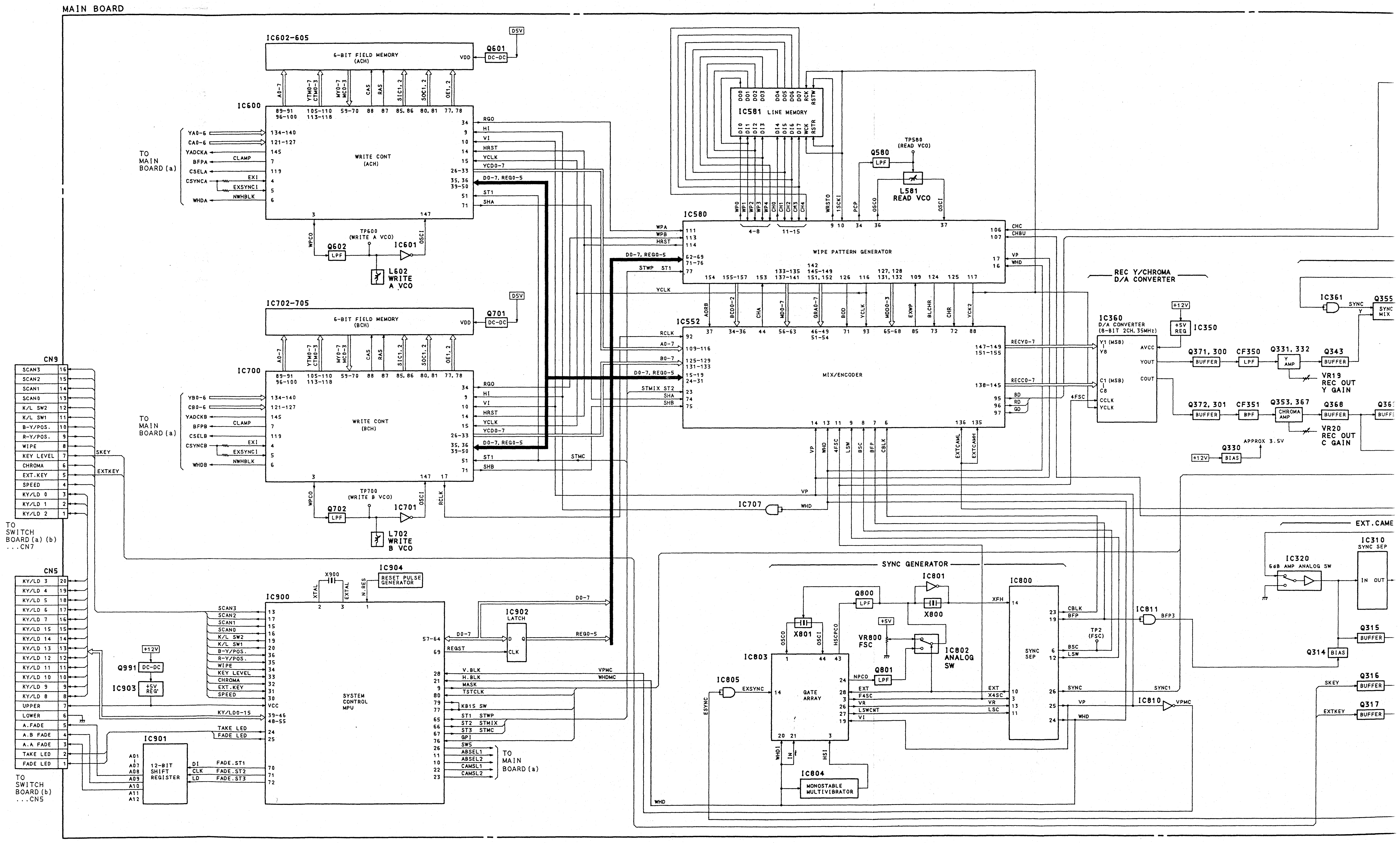
BLOCK DIAGRAM OF MAIN


MAIN BOARD
SOURCE-1 INPUT
SOURCE-2 INPUT
EXT CAMERA INPUT
INPUT SELECT ACH
INPUT SELECT BCH
DEMODULATOR ACH
DEMODULATOR BCH
CN10
NC 20
S1.C 19
GND 18
S1.Y 17
GND 16
BIAS1 15
S1.V 14
GND 13
S1.THR 12
GND 11
S2.C 10
GND 9
S2.Y 8
GND 7
BIAS2 6
S2.V 5
GND 4
S2.THR 3
GND 2
EXT.C 1
SOURCE-1
SOURCE-2
Y/C
COMP
MONITOR OUT
TO REAR BOARD ...CN3
CN4
GND 20
EXT.Y 19
GND 18
BIAS3 17
EXT.V 16
GND 15
EXT CAMERA
TO REAR BOARD ...CN1
CN1
GND 1
SW.5V 2
A5V 3
GND 4
+12V 5
D5V 6
GND 7
-12V 8
NC 9
GND 10
NC 11
NC 12
NC 13
+5V
+12V
VDD
-12V
TO POWER BOARD ...CN3
TO MAIN BOARD (b)
SW5V
EXTY
ABSL1
ABSL2
CAMSL1
CAMSL2
Q16 BUFFER
Q14 BUFFER
Q15 BUFFER
Q10 BUFFER
Q80, 81 VIDEO AMP
Q13 BUFFER
CF1
IC1 (a) 75Ω DRIVE 6.2dB
Q11 BIAS
SW5V
S1.C
S1.Y
S1.V
Q26 BUFFER
Q24 BUFFER
Q25 BUFFER
Q20 BUFFER
Q82, 83 VIDEO AMP
Q23 BUFFER
CF4
IC1 (b) 75Ω DRIVE 6.2dB
Q21 BIAS
S2.C
S2.Y
S2.V
Q36 BUFFER
Q34 BUFFER
Q35 BUFFER
Q30 BUFFER
Q84, 85 VIDEO AMP
Q33 BUFFER
CF7
Q31 BIAS
Q12 BUFFER
EXT.C
EXT.Y
EXT.V
CAM.C
CAM.Y
IC100 INPUT SW
S1.Y 1
S2.Y 3
CAM.Y 5
2 4 7 Y
IC102 INPUT SW
S1.C 1
S2.C 3
CAM.C 5
2 4 7 C
CF102 BPF
Q131 BUFFER
VR100 ACH BGP
DL1 (a)
TP101 (ACH BGP)
IC104 +5V REG
+12V
IC105 DECODER
VCC
YIN 25
SYNC SEP
GATE PULSE
CHROMA AMP
CIN 5
SYNC 28
BLK 23
HD 24
R-Y DEMODULATOR 20
B-Y DEMODULATOR 19
4 3 16 14 18 10 11
COUT RYIN BYIN SC VCXO TINT
VR101 ACH CHROMA GAIN
TP100 (ACH F VCXO)
CT100 ACH F VCXO
VR102 ACH CHROMA PHASE
IC103
VR11
ACH/BCH H
Q136 BUFF
R-Y
B-Y
CF
IC201 INPUT SW
S1.Y 1
S2.Y 3
CAM.Y 5
IC203 INPUT SW
S1.C 1
S2.C 3
CAM.C 5
CF9 BPF
Q130 BUFFER
VR200 BCH BGP
DL1 (b)
TP201 (BCH BGP)
IC204 +5V REG
IC205 DECODER
R-Y DEMODULATOR
B-Y DEMODULATOR
VR201 BCH CHROMA GAIN
TP200 (BCH F VCXO)
CT200 BCH F VCXO
VR202 BCH CHROMA PHASE
IC208
Q50 BUFFE

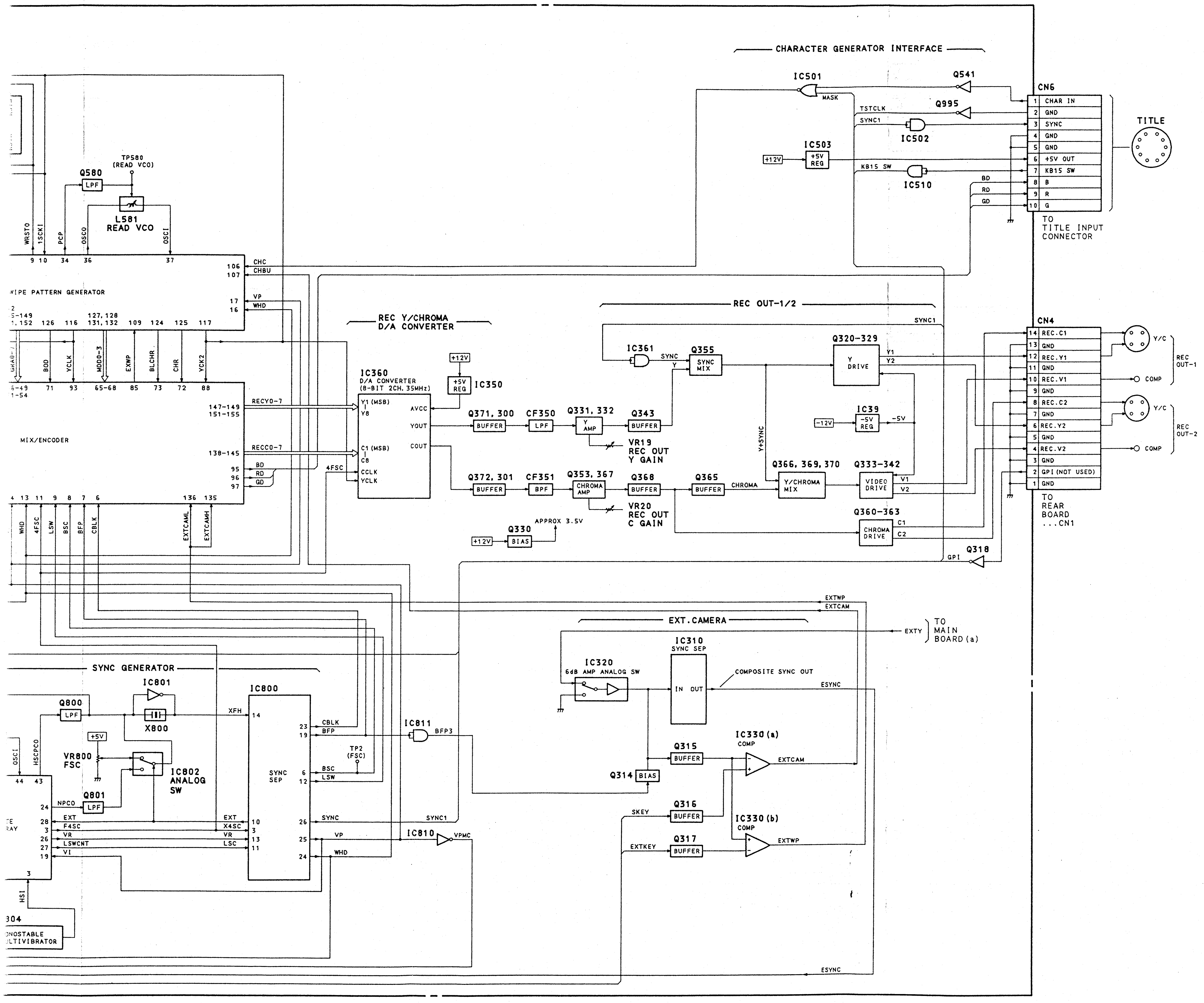
GRAM OF MAIN BOARD (1/3)


ODULATOR ACH
VR110
ACH/BCH H PHASE
IC107
CSYNCA
WHDA
IC103
A/D CONVERTER ACH
IC120
A/D CONVERTER
Q136
BUFFER
CF141
LPF
Q110-114
Y AMP
Q115
BUFFER
IN
22
YA0-6
AD-H
AD-L
3
18
13
YADCKA
BLK
HD
23
24
Q101
CLAMP
VR120
ACH Y GAIN
Y.CL LEVEL
TO MAIN BOARD (b)
IC121
A/D CONVERTER
BIAS/CLAMP LEVEL
+5V
R-Y DEMODULATOR
20
R-Y
CF142
LPF
Q116-120
R-Y AMP
IC110(a)
BUFFER
IC111
ANALOG SW
Q104
BUFFER
Q127
BUFFER
CA0-6
Q310
Q141
IC35(a)
BUFFER
IC36(a)
BUFFER
AD-H
Q102
CLAMP
R-Y.CL LEVEL
B-Y DEMODULATOR
19
B-Y
CF143
LPF
Q121-125
B-Y AMP
IC110(b)
BUFFER
Q105
CLAMP
CCP
VR302
ACH CARRIER BAL
VR304
ACH CARRIER BAL
VR303
BCH CARRIER BAL
VR301
BCH CARRIER BAL
18
10
11
SC
VCXO
TINT
Q126
BIAS
Q103
CLAMP
B-Y.CL LEVEL
IC131
BFPA
VR102
ACH CHROMA PHASE
CSELA
IC35(b)
BUFFER
B-Y.CL LEVEL
IC36(b)
BUFFER
XO)
CT100
ACH
F VCXO
IC35(c)
BUFFER
CCP
IC36(c)
BUFFER
IC35(d)
BUFFER
R-Y.CL LEVEL
IC36(d)
BUFFER
ODULATOR BCH
Q151
Q140
IC250(a)
BUFFER
Y.CL LEVEL
IC251(a)
BUFFER
IC207
CSYNCB
WHDB
VR306
ACH PEDESTAL
VR305
BCH PEDESTAL
IC250(b)
BUFFER
AD-L
IC251(b)
BUFFER
A/D CONVERTER BCH
IC220
A/D CONVERTER
IC208
Q50
BUFFER
CF241
LPF
Q210-214
Y AMP
Q215
BUFFER
YB0-6
Q201
CLAMP
YADCKB
VR220
BCH Y GAIN
TO MAIN BOARD (b)
IC221
A/D CONVERTER
CF242
LPF
Q216-220
R-Y AMP
IC28(a)
BUFFER
IC211
ANALOG SW
Q204
BUFFER
Q206
BUFFER
CB0-6
Q202
CLAMP
CF243
LPF
Q221-225
B-Y AMP
IC28(b)
BUFFER
Q205
CLAMP
Q226
BIAS
Q203
CLAMP
IC231
BFPB
VR202
BCH CHROMA PHASE
CSELB
CT200
BCH
F VCXO

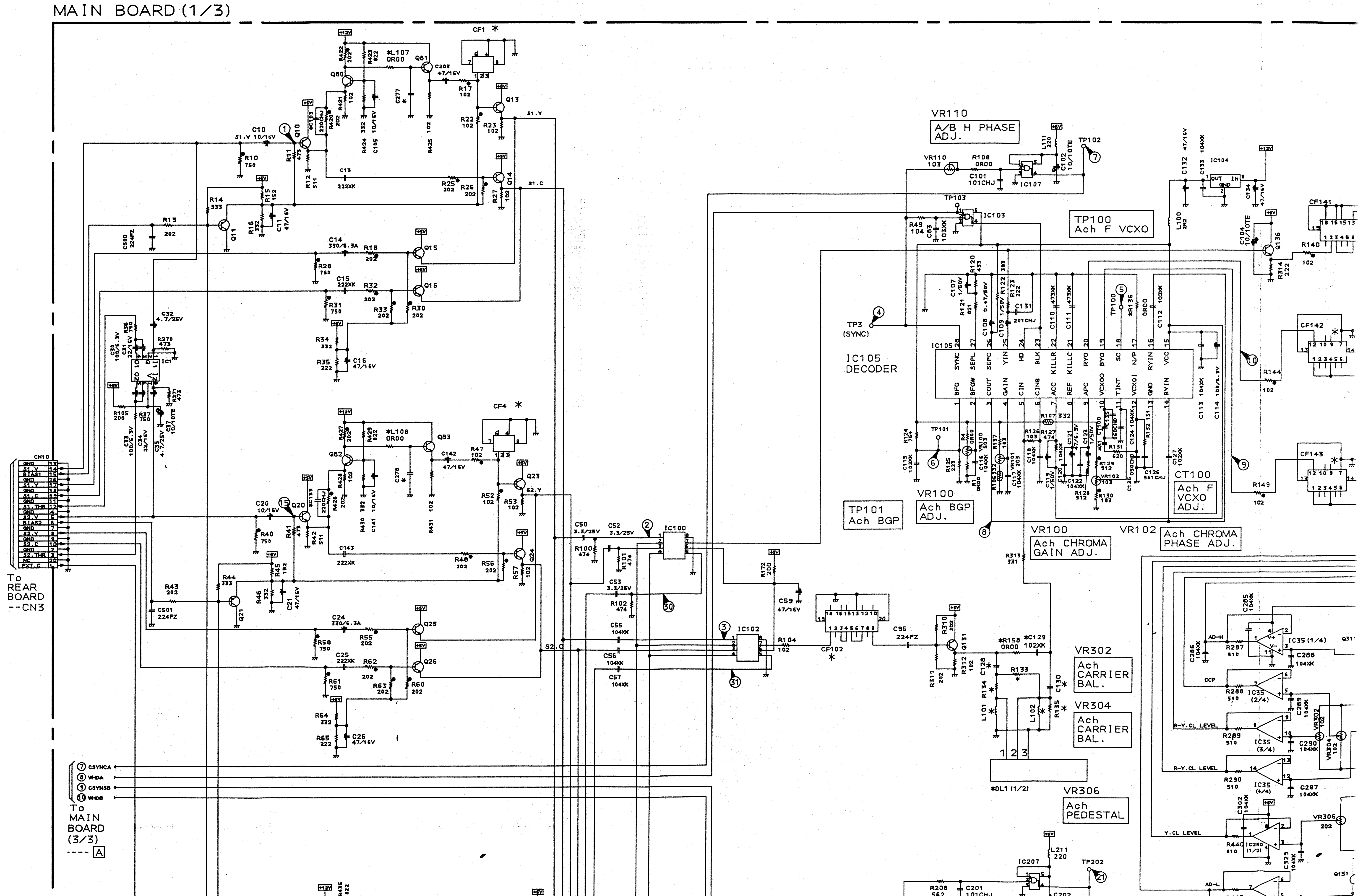
BLOCK DIAGRAM OF MAIN BOARD (2/3, 3/3)


MAIN BOARD
IC602-605
6-BIT FIELD MEMORY (ACH)
Q601
DC-DC
D5V
IC600
WRITE CONT (ACH)
TP600 (WRITE A VCO)
Q602
LPF
IC601
L602 WRITE A VCO
TO MAIN BOARD (a)
IC702-705
6-BIT FIELD MEMORY (BCH)
Q701
IC700
WRITE CONT (BCH)
TP700 (WRITE B VCO)
Q702
IC701
L702 WRITE B VCO
CN9
TO SWITCH BOARD (a) (b) ...CN7
CN5
TO SWITCH BOARD (b) ...CN5
IC581 LINE MEMORY
IC580
WIPE PATTERN GENERATOR
TPS80 (READ VCO)
Q580
L581 READ VCO
IC552
MIX/ENCODER
IC707
REC Y/CHROMA D/A CONVERTER
IC360
D/A CONVERTER (8-BIT 2CH, 35MHz)
IC350
+5V REG
+12V
Q371, 300 BUFFER
CF350 LPF
Q331, 332 Y AMP
Q343 BUFFER
VR19 REC OUT Y GAIN
Q372, 301 BUFFER
CF351 BPF
Q353, 367 CHROMA AMP
Q368 BUFFER
VR20 REC OUT C GAIN
Q330 BIAS
APPROX 3.5V
IC361
Q355 SYNC MIX
EXT.CAME
IC310 SYNC SEP
IC320 6dB AMP ANALOG SW
Q315 BUFFER
Q314 BIAS
Q316 BUFFER
Q317 BUFFER
SKEY
EXTKEY
IC811
IC810
SYNC GENERATOR
IC801
Q800 LPF
X800
X801
+5V
VR800 FSC
IC802 ANALOG SW
Q801 LPF
IC803
GATE ARRAY
IC805
IC804
MONOSTABLE MULTIVIBRATOR
IC800
SYNC SEP
TP2 (FSC)
IC904
RESET PULSE GENERATOR
X900
IC900
SYSTEM CONTROL MPU
IC902 LATCH
Q991 DC-DC
IC903 +5V REG
IC901
12-BIT SHIFT REGISTER
TO MAIN BOARD (a)

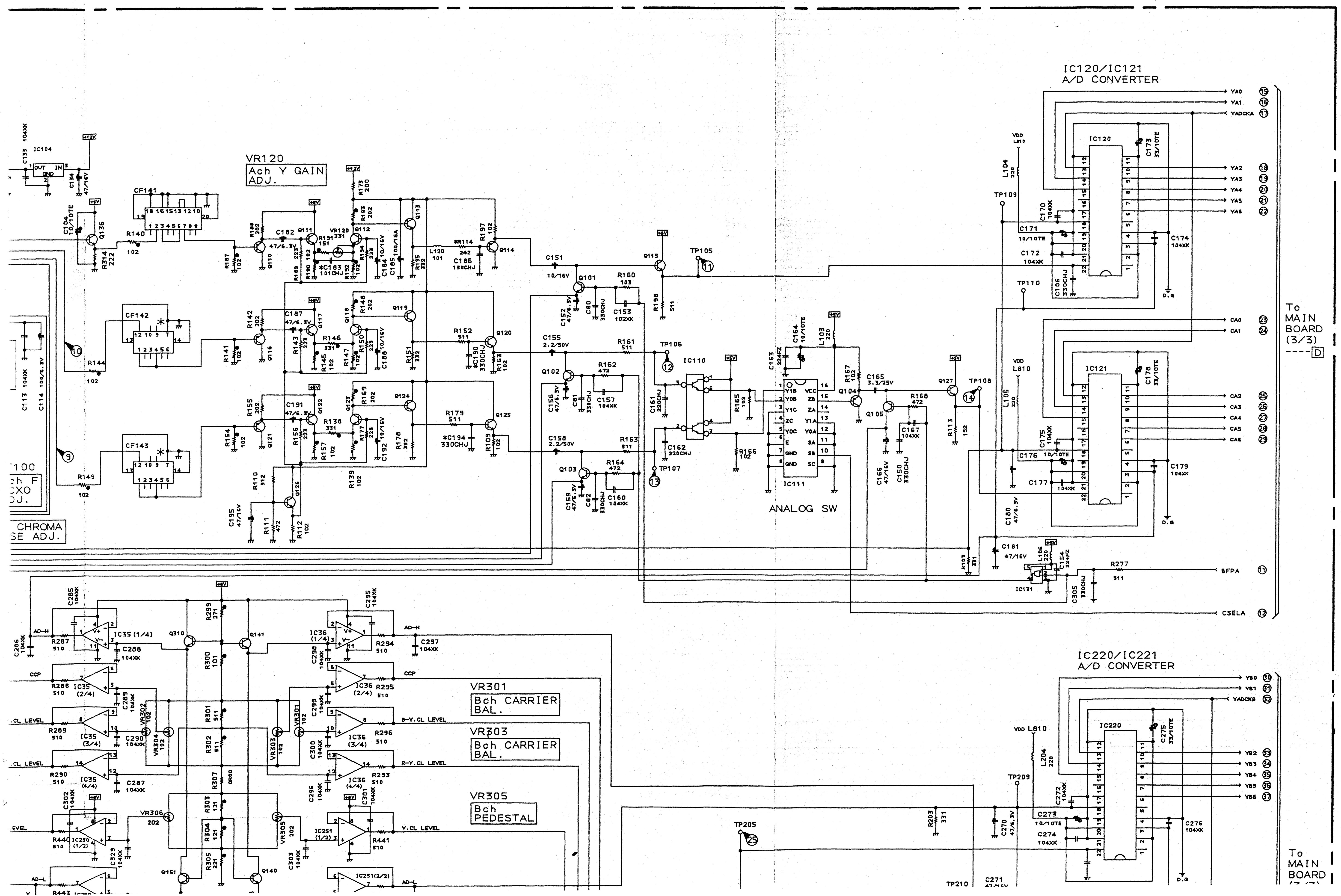
M OF MAIN BOARD (2/3, 3/3)


CHARACTER GENERATOR INTERFACE
IC501
MASK
Q541
Q995
TSTCLK
SYNC1
IC502
IC503
+12V
+5V REG
KB15 SW
IC510
BD
RD
GD
CN6
1 CHAR IN
2 GND
3 SYNC
4 GND
5 GND
6 +5V OUT
7 KB15 SW
8 B
9 R
10 G
TITLE
TO TITLE INPUT CONNECTOR
TP580 (READ VCO)
Q580
LPF
L581 READ VCO
WRSTO
1SCKI
PCP
OSCO
OSCI
9 10 34 36 37
106 CHC
107 CHBU
WIPE PATTERN GENERATOR
17 VP
16 WHD
127, 128 131, 132 109 124 125 117
126 116
BOD
YCLK
MODO-3
EXWP
BLCHR
CHR
YCK2
71 93 65-68 85 73 72 88
147-149 151-155
RECY0-7
MIX/ENCODER
138-145
RECC0-7
95 BD
96 RD
97 GD
4FSC
13 11 9 8 7 6
136 135
WHD
4FSC
LSW
BSC
BFP
CBLK
EXTCAML
EXTCAMH
REC Y/CHROMA D/A CONVERTER
IC360
D/A CONVERTER (8-BIT 2CH. 35MHz)
Y1 (MSB) Y8
C1 (MSB) C8
CCLK
YCLK
AVCC
YOUT
COUT
+12V
+5V REG
IC350
Q371, 300
BUFFER
CF350
LPF
Q331, 332
Y AMP
Q343
BUFFER
VR19 REC OUT Y GAIN
Q372, 301
BUFFER
CF351
BPF
Q353, 367
CHROMA AMP
Q368
BUFFER
VR20 REC OUT C GAIN
Q365
BUFFER
CHROMA
Q330
+12V
BIAS
APPROX 3.5V
REC OUT-1/2
SYNC1
IC361
SYNC
Y
Q355
SYNC MIX
Q320-329
Y DRIVE
Y1
Y2
IC39
-12V
-5V REG
-5V
Y+SYNC
Q366, 369, 370
Y/CHROMA MIX
Q333-342
VIDEO DRIVE
V1
V2
Q360-363
CHROMA DRIVE
C1
C2
Q318
GPI
CN4
14 REC.C1
13 GND
12 REC.Y1
11 GND
10 REC.V1
9 GND
8 REC.C2
7 GND
6 REC.Y2
5 GND
4 REC.V2
3 GND
2 GPI (NOT USED)
1 GND
Y/C
COMP
REC OUT-1
REC OUT-2
TO REAR BOARD ...CN1
EXTWP
EXTCAM
EXT.CAMERA
EXTY
TO MAIN BOARD (a)
IC310
SYNC SEP
IN OUT
COMPOSITE SYNC OUT
IC320
6dB AMP ANALOG SW
ESYNC
IC330 (a)
COMP
Q315
BUFFER
EXTCAM
Q314 BIAS
Q316
SKEY
BUFFER
IC330 (b)
COMP
Q317
EXTKEY
BUFFER
EXTWP
SYNC GENERATOR
IC801
Q800
LPF
X800
XFH
IC800
14
23 CBLK
19 BFP
TP2 (FSC)
6 BSC
12 LSW
SYNC SEP
+5V
VR800 FSC
IC802 ANALOG SW
OSCI
HSCPCO
44 43
Q801
24 NPCO
LPF
28 EXT
3 F4SC
26 VR
27 LSWCNT
19 VI
EXT
X4SC
VR
LSC
10
3
13
11
26 SYNC
25 VP
24 WHD
SYNC1
IC811
BFP3
IC810
VPMC
3
HSI
304
ONOSTABLE MULTIVIBRATOR
ESYNC

SCHEMATIC DIAGRAM


MAIN BOARD (1/3)
VR110
A/B H PHASE ADJ.
TP100
Ach F VCXO
TP3 (SYNC)
IC105 DECODER
TP101
Ach BGP
VR100
Ach BGP ADJ.
VR100
Ach CHROMA GAIN ADJ.
VR102
Ach CHROMA PHASE ADJ.
CT100
Ach F VCXO ADJ.
VR302
Ach CARRIER BAL.
VR304
Ach CARRIER BAL.
VR306
Ach PEDESTAL
To REAR BOARD --CN3
To MAIN BOARD (3/3)
A
CN10
GND
S1.V
BIAS1
GND
S1.Y
GND
S1.C
GND
S1.THR
GND
S2.V
BIAS2
GND
S2.Y
GND
S2.C
GND
S2.THR
NC
EXT.C
⑦ CSYNCA
⑧ WHDA
⑨ CSYNSB
⑩ WHDB
CF1
CF4
CF102
CF141
CF142
CF143
IC100
IC102
IC103
IC104
IC107
IC1
IC35 (1/4)
IC35 (2/4)
IC35 (3/4)
IC35 (4/4)
IC207
IC250 (1/2)
Q10
Q11
Q13
Q14
Q15
Q16
Q20
Q21
Q23
Q24
Q25
Q26
Q80
Q81
Q82
Q83
Q131
Q136
*DL1 (1/2)
TP102
TP103
TP101
TP202
S1.Y
S1.C
S2.Y
S2.C
B-Y.CL LEVEL
R-Y.CL LEVEL
Y.CL LEVEL
AD-H
AD-L
CCP

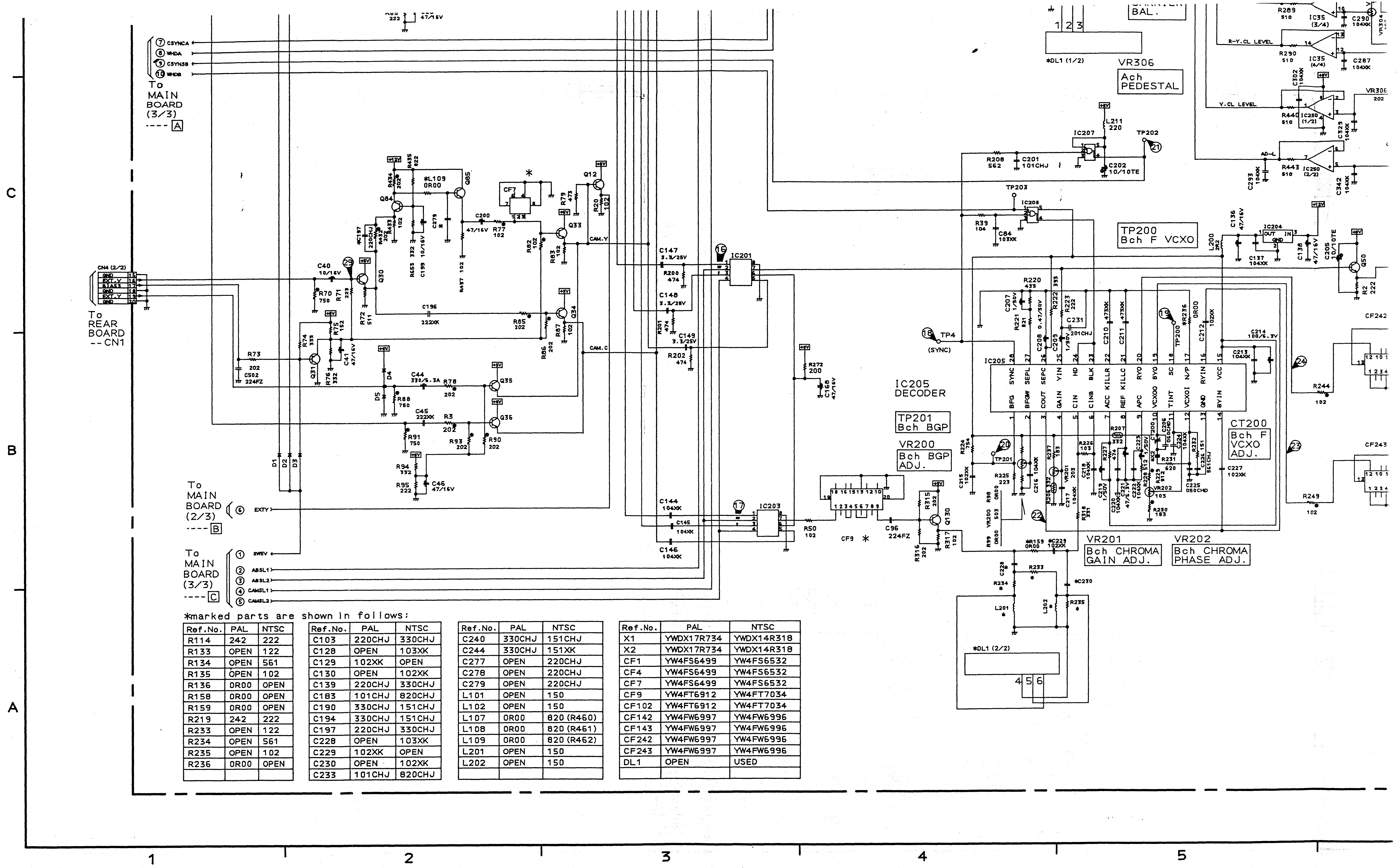
TIC DIAGRAM OF MAIN BOARD (1/3)


IC120/IC121
A/D CONVERTER
IC220/IC221
A/D CONVERTER
VR120
Ach Y GAIN ADJ.
VR301
Bch CARRIER BAL.
VR303
Bch CARRIER BAL.
VR305
Bch PEDESTAL
ANALOG SW
CHROMA
SE ADJ.
To MAIN BOARD (3/3) D
To MAIN BOARD
YA0
YA1
YADCKA
YA2
YA3
YA4
YA5
YA6
CA0
CA1
CA2
CA3
CA4
CA5
CA6
BFPA
CSELA
YB0
YB1
YADCKB
YB2
YB3
YB4
YB5
YB6
IC104
IC110
IC111
IC120
IC121
IC131
IC220
IC35 (1/4)
IC36 (1/4)
IC251(1/2)
IC251(2/2)
CF141
CF142
CF143
TP105
TP106
TP107
TP108
TP109
TP110
TP205
TP209
TP210
AD-H
AD-L
CCP
B-Y.CL LEVEL
R-Y.CL LEVEL
Y.CL LEVEL
D.G

<Index>

MAIN BOARD (1/3)

IC1	E1
IC28	B8
IC35	D5
IC36	D6
IC100	E3
IC102	D4
IC103	F4
IC104	F5
IC105	E4
IC107	F5
IC110	E8
IC111	E8
IC120	F9
IC121	E9
IC131	D9
IC201	C3
IC203	B3
IC204	C5
IC205	B4
IC207	C5
IC208	C4
IC211	B8
IC220	D9
IC221	C9
IC231	A9
IC250	C5
IC251	C6
Q10	F2
Q11	F2
Q12	C3
Q13	F3
Q14	F3
Q15	F2
Q16	E2
Q20	E2
Q21	D2
Q23	E3
Q24	D3
Q25	D2
Q26	D2
Q30	C2
Q31	B2
Q33	C3
Q34	C3
Q35	B2
Q36	B2
Q50	C6
Q80	F2
Q81	F2
Q82	E2
Q83	E2
Q84	C2
Q85	C2
Q101	E7
Q102	E7
Q103	E7
Q104	E8
Q105	E8
Q110	F6
Q111	F6


To MAIN BOARD (3/3) ---- A
⑦ CSYNCA
⑧ WHDA
⑨ CSYNSB
⑩ WHDB
To REAR BOARD --CN1
CN4 (2/2)
GND
EXT.Y
BIAS1
GND
EXT.Y
GND
To MAIN BOARD (2/3) ---- B
⑥ EXTY
To MAIN BOARD (3/3) ---- C
① SW5V
② ABSL1
③ ABSL2
④ CAMSL1
⑤ CAMSL2
CAM.Y
CAM.C
IC201
IC203
CF7
CF9
IC205 DECODER
TP200 Bch F VCXO
TP201 Bch BGP
VR200 Bch BGP ADJ.
CT200 Bch F VCXO ADJ.
VR201 Bch CHROMA GAIN ADJ.
VR202 Bch CHROMA PHASE ADJ.
VR306 Ach PEDESTAL
BAL.
*DL1 (1/2)
*DL1 (2/2)
IC207
IC208
IC204
IC35 (3/4)
IC35 (4/4)
IC250 (1/2)
IC250 (2/2)
R-Y.CL LEVEL
Y.CL LEVEL
AD-L
TP202
TP203
TP4 (SYNC)
SYNC
SEPL
SEPC
YIN
HD
BLK
KILLR
KILLC
RYO
BYO
SC
N/P
RYIN
VCC
BFG
BFGW
COUT
GAIN
CIN
CINB
ACC
REF
APC
VCXOO
TINT
VCXOI
GND
BYIN
CF242
CF243
C
B
A
1
2
3
4
5

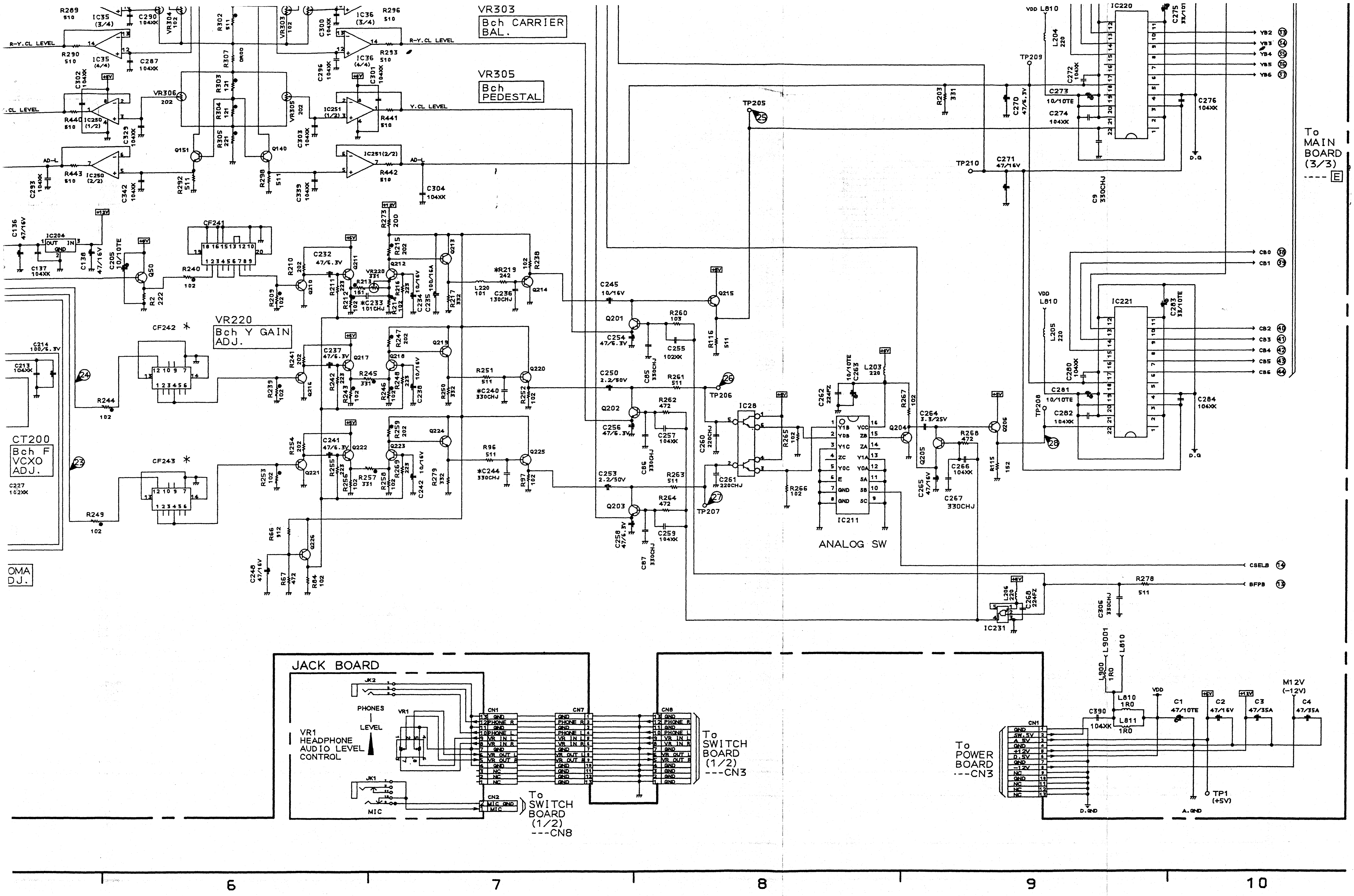
*marked parts are shown in follows;

Ref.No.	PAL	NTSC
R114	242	222
R133	OPEN	122
R134	OPEN	561
R135	OPEN	102
R136	0R00	OPEN
R158	0R00	OPEN
R159	0R00	OPEN
R219	242	222
R233	OPEN	122
R234	OPEN	561
R235	OPEN	102
R236	0R00	OPEN

Ref.No.	PAL	NTSC
C103	220CHJ	330CHJ
C128	OPEN	103XK
C129	102XK	OPEN
C130	OPEN	102XK
C139	220CHJ	330CHJ
C183	101CHJ	820CHJ
C190	330CHJ	151CHJ
C194	330CHJ	151CHJ
C197	220CHJ	330CHJ
C228	OPEN	103XK
C229	102XK	OPEN
C230	OPEN	102XK
C233	101CHJ	820CHJ

Ref.No.	PAL	NTSC
C240	330CHJ	151CHJ
C244	330CHJ	151XK
C277	OPEN	220CHJ
C278	OPEN	220CHJ
C279	OPEN	220CHJ
L101	OPEN	150
L102	OPEN	150
L107	0R00	820 (R460)
L108	0R00	820 (R461)
L109	0R00	820 (R462)
L201	OPEN	150
L202	OPEN	150

Ref.No.	PAL	NTSC
X1	YWDX17R734	YWDX14R318
X2	YWDX17R734	YWDX14R318
CF1	YW4FS6499	YW4FS6532
CF4	YW4FS6499	YW4FS6532
CF7	YW4FS6499	YW4FS6532
CF9	YW4FT6912	YW4FT7034
CF102	YW4FT6912	YW4FT7034
CF142	YW4FW6997	YW4FW6996
CF143	YW4FW6997	YW4FW6996
CF242	YW4FW6997	YW4FW6996
CF243	YW4FW6997	YW4FW6996
DL1	OPEN	USED


VR303
Bch CARRIER BAL.
VR305
Bch PEDESTAL
R-Y.CL LEVEL
Y.CL LEVEL
AD-L
TP205
TP209
TP210
IC220
IC221
To MAIN BOARD (3/3)
---- E
VR220
Bch Y GAIN ADJ.
CF241
CF242
CF243
IC204
CT200
Bch F VCXO ADJ.
OMA
DJ.
TP206
TP207
TP208
IC28
IC211
ANALOG SW
IC231
CSELB ⑭
BFPB ⑬
CB0 ㉚
CB1 ㉛
CB2 ㊵
CB3 ㊶
CB4 ㊷
CB5 ㊸
CB6 ㊹
YB2 ㉝
YB3 ㉞
YB4 ㉟
YB5 ㊱
YB6 ㊲
JACK BOARD
JK2
JK1
PHONES
LEVEL
VR1
VR1 HEADPHONE AUDIO LEVEL CONTROL
MIC
CN1
CN2
CN7
CN8
To SWITCH BOARD (1/2) ---CN3
To SWITCH BOARD (1/2) ---CN8
To POWER BOARD ---CN3
M12V (-12V)
TP1 (+5V)
D.GND
A.GND
6
7
8
9
10

Q82	E2
Q83	E2
Q84	C2
Q85	C2
Q101	E7
Q102	E7
Q103	E7
Q104	E8
Q105	E8
Q110	F6
Q111	F6
Q112	F6
Q113	F7
Q114	F7
Q115	F8
Q116	E6
Q117	E6
Q118	E6
Q119	E7
Q120	E7
Q121	E6
Q122	E6
Q123	E6
Q124	E7
Q125	E7
Q126	E6
Q127	E9
Q130	B4
Q131	D4
Q136	F6
Q140	C6
Q141	D6
Q151	C6
Q201	C7
Q202	B7
Q203	B7
Q204	B9
Q205	B9
Q206	B9
Q210	C6
Q211	C6
Q212	C7
Q213	C7
Q214	C7
Q215	C8
Q216	B6
Q217	B6
Q218	B7
Q219	B7
Q220	B7
Q221	B6
Q222	B6
Q223	B7
Q224	B7
Q225	B7
Q226	B6
Q310	D6
D1	B1
D2	B2
D3	B2
D4	B2
D5	B2

SCHEMATIC DIAGRAM OF MAIN BOA

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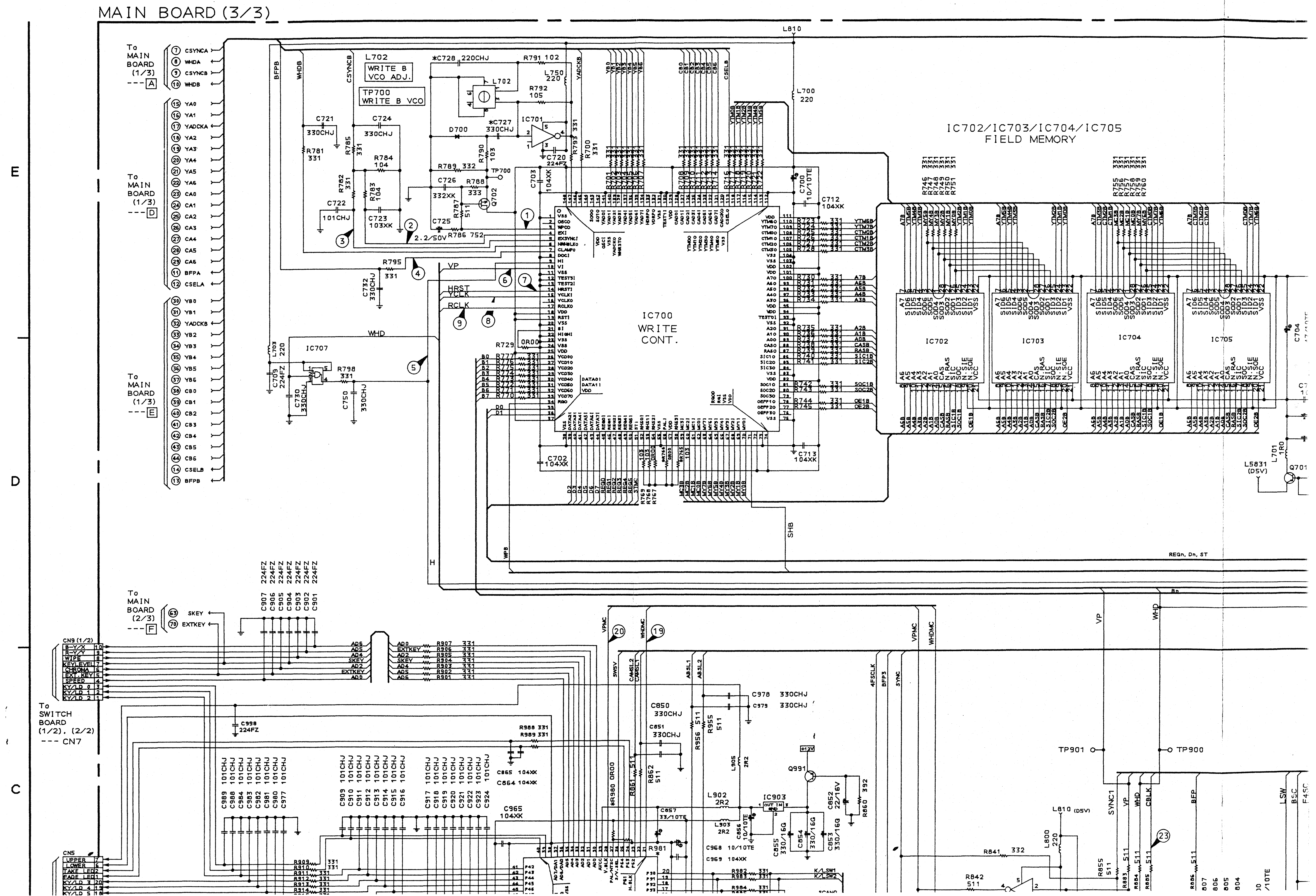
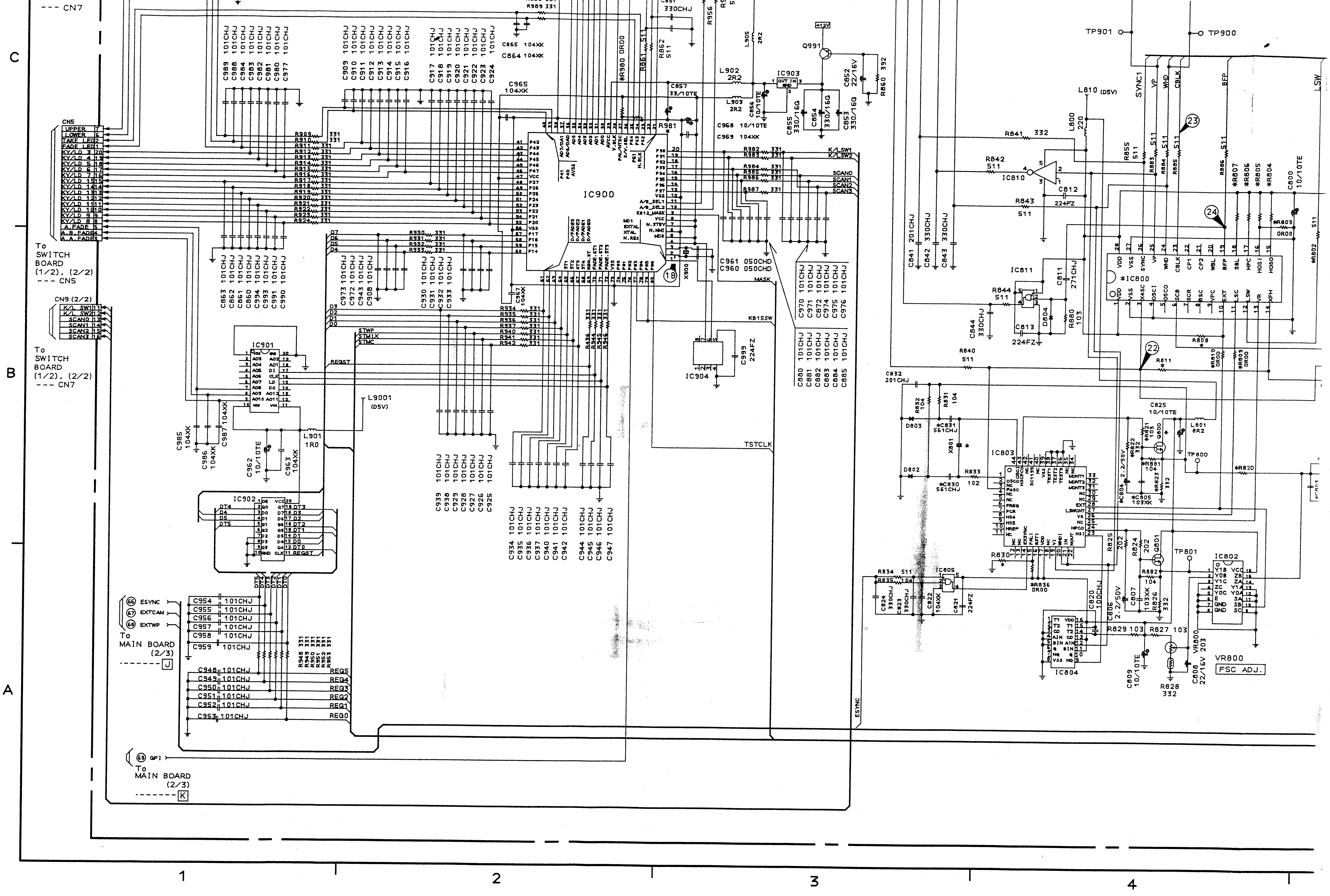
MAIN
BOARD
(3/3)

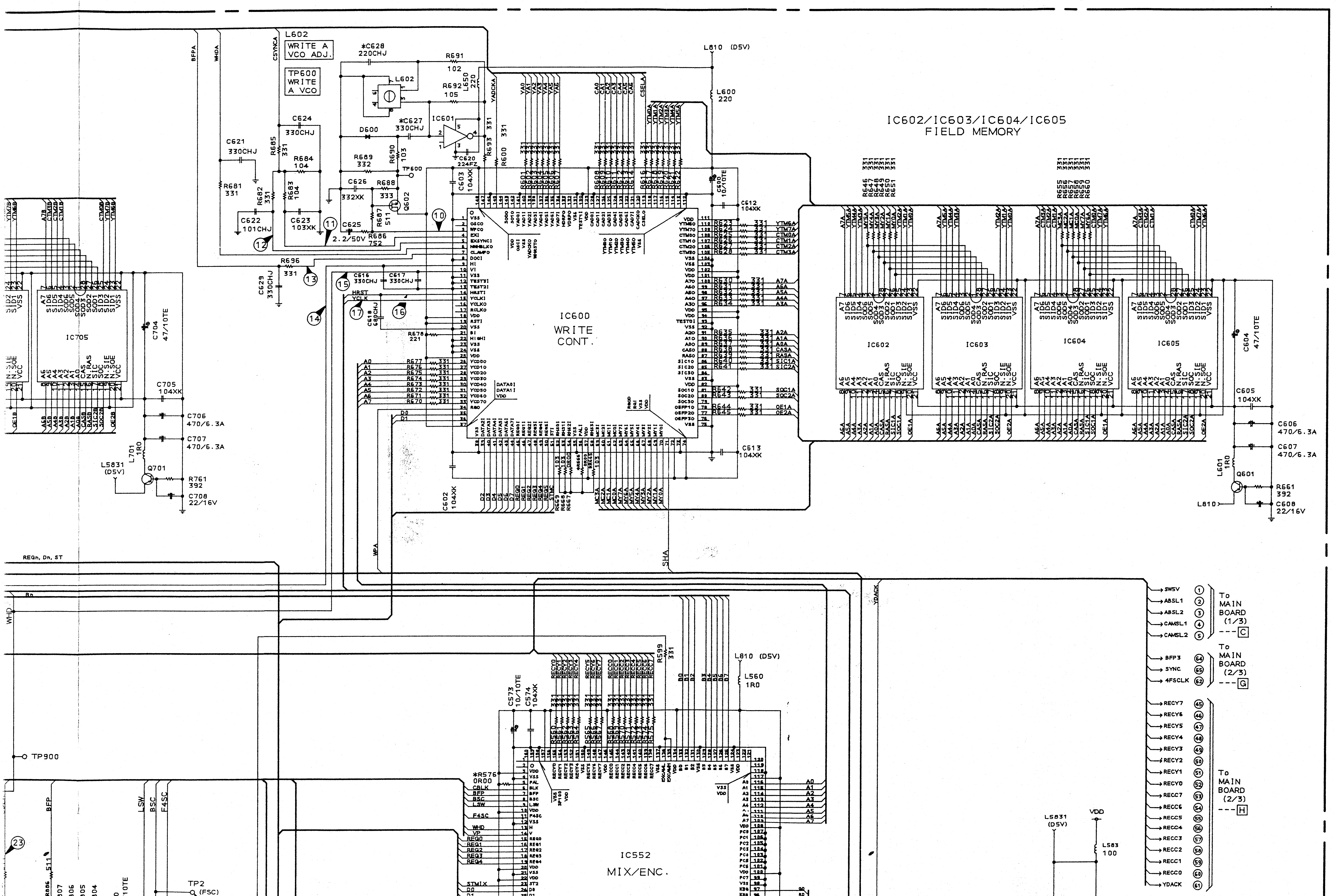
IC501	C8
IC502	B8
IC503	A7
IC510	B7
IC552	C6
IC580	B6
IC581	B5
IC600	E6
IC601	E5
IC602	D7
IC603	D7
IC604	D7
IC605	D8
IC700	E2
IC701	E2
IC702	D3
IC703	D4
IC704	D4
IC705	D4
IC707	D1
IC800	B4
IC801	B5
IC802	A4
IC803	B4
IC804	A4
IC805	A3
IC810	C4
IC811	B4
IC900	C2
IC901	B1
IC902	B1
IC903	C3
IC904	B3
Q541	B8
Q580	A5
Q601	D8
Q602	E5
Q701	D5
Q702	E2
Q800	B4
Q801	B4
Q991	C3
Q995	B7
D550	C8
D590	A5
D600	E5
D700	E2
D800	B5
D801	B5
D802	B3
D803	B3
D804	B4
D991	B8

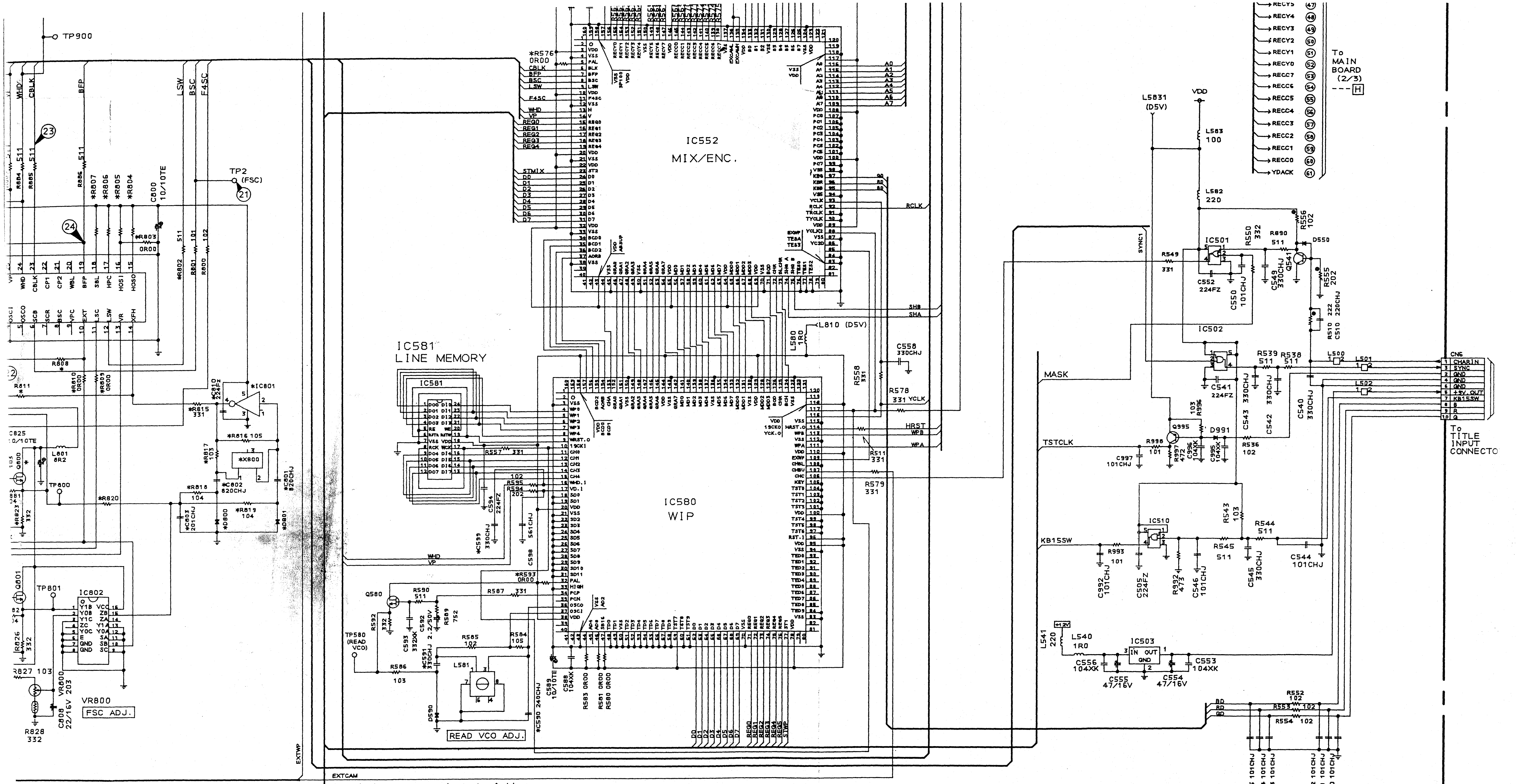

MAIN BOARD (3/3)
E
D
C
To MAIN BOARD (1/3) --- A
To MAIN BOARD (1/3) --- D
To MAIN BOARD (1/3) --- E
To MAIN BOARD (2/3) --- F
To SWITCH BOARD (1/2), (2/2) --- CN7
CN9 (1/2)
CN5
L702 WRITE B VCO ADJ.
TP700 WRITE B VCO
IC701
IC707
IC700 WRITE CONT.
IC702/IC703/IC704/IC705 FIELD MEMORY
IC702
IC703
IC704
IC705
IC903
Q991
Q702
Q701
L810
L700 220
L5831 (D5V)
TP901
TP900
REGn, Dn, ST
VP
WHD
HRST
YCLK
RCLK
SHB
WPB
VPMC
WHDMC

D803	B3
D804	B4
D991	B8


C
B
A
1
2
3
4
--- CN7
CN5
UPPER
LOWER
TAKE LED
FADE LED
KY/LD
A.FADE
A.B.FADE
A.A.FADE
To SWITCH BOARD (1/2), (2/2) --- CN5
CN9 (2/2)
K/L SW1
K/L SW2
SCAN0
SCAN1
SCAN2
SCAN3
To SWITCH BOARD (1/2), (2/2) --- CN7
IC900
IC901
IC902
IC903
IC904
L9001 (D5V)
L901 1R0
X900
K/LSW1
K/LSW2
SCAN0
SCAN1
SCAN2
SCAN3
MASK
KB15SW
TSTCLK
ESYNC
REGST
STWP
STMIX
STMC
REG5
REG4
REG3
REG2
REG1
REG0
66 ESYNC
67 EXTCAM
68 EXTWP
To MAIN BOARD (2/3)
J
69 QP1
To MAIN BOARD (2/3)
K
Q991
+12V
L902 2R2
L903 2R2
L905 2R2
TP901
TP900
L810 (D5V)
L800 220
SYNC1
VP
WHD
CBLK
BFP
LSW
IC810
IC811
*IC800
IC802
IC803
IC805
IC804
Q800
Q801
TP800
TP801
L801 6R2
VR800 203
VR800 FSC ADJ.
D802
D803
D804
X801
18
22
23
24

OF MAIN BOARD (3/3)


L602
WRITE A VCO ADJ.
TP600 WRITE A VCO
IC601
IC600
WRITE CONT.
IC602/IC603/IC604/IC605
FIELD MEMORY
IC602
IC603
IC604
IC605
IC705
IC552
MIX/ENC.
L810 (D5V)
L600 220
Q601
Q602
Q701
L5831 (D5V)
L601 1R0
L701 1R0
L560 1R0
L583 100
VDD
TP900
TP2 (FSC)
SHA
WPA
YDACK
REGn, Dn, ST
WHD
BFPA
WHDA
CSYNCA
SWSV ①
ABSL1 ②
ABSL2 ③
CAMSL1 ④
CAMSL2 ⑤
To MAIN BOARD (1/3) ---C
BFP3 (64)
SYNC (65)
4FSCLK (62)
To MAIN BOARD (2/3) ---G
RECY7 (45)
RECY6 (46)
RECY5 (47)
RECY4 (48)
RECY3 (49)
RECY2 ㊿
RECY1 (51)
RECY0 (52)
RECC7 (53)
RECC6 (54)
RECC5 (55)
RECC4 (56)
RECC3 (57)
RECC2 (58)
RECC1 (59)
RECC0 (60)
YDACK (61)
To MAIN BOARD (2/3) ---H


TP900
IC552
MIX/ENC.
IC581
LINE MEMORY
IC580
WIP
IC501
IC502
IC503
IC510
IC801
IC802
TP2 (FSC)
TP801
TP800
TP580 (READ VCO)
L5831 (D5V)
VDD
L810 (D5V)
To MAIN BOARD (2/3)
---H
To TITLE INPUT CONNECTO
CN6
CHARIN
SYNC
GND
GND
+5V OUT
KB15SW
MASK
TSTCLK
KB15SW
HRST
RCLK
SHB
SHA
YCLK
EXTCAM
EXTWP
VR800
FSC ADJ.
READ VCO ADJ.
X800
Q580
Q800
Q801
Q995
Q541
D550
D991
L581
L583 100
L582 220
L540 1R0
L541 220
+12V

*marked parts are shown in follows:

Ref.No.	PAL	NTSC
IC800	MN676021PPS	MN676011NPS
IC801	YWSC7SU04F	OPEN
Q800	2SK662-PQR	OPEN
D800	1SV153	OPEN
D801	1SV153	OPEN
R576	0R00	OPEN
R593	0R00	OPEN
R665	103	OPEN
R666	0R00	OPEN

Ref.No.	PAL	NTSC
R667	OPEN	103
R765	103	OPEN
R766	0R00	OPEN
R767	OPEN	103
R802	511	OPEN
R803	0R00	OPEN
R804	OPEN	0R00
R805	OPEN	0R00
R806	OPEN	0R00

Ref.No.	PAL	NTSC
R807	OPEN	0R00
R808	OPEN	0R00
R809	0R00	OPEN
R810	0R00	OPEN
R811	OPEN	0R00
R815	331	OPEN
R816	105	OPEN
R817	103	OPEN
R818	104	OPEN

Ref.No.	PAL	NTSC
R819	104	OPEN
R820	OPEN	0R00
R821	103	OPEN
R822	332	OPEN
R823	332	822
R830	OPEN	0R00
R836	0R00	OPEN
R881	104	OPEN
R980	0R00	OPEN

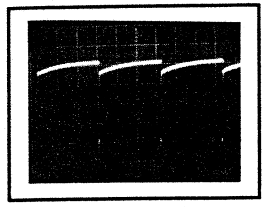
Ref.No.	PAL	NTSC
R981	OPEN	0R00
C590	240CHJ	330CHJ
C591	330CHJ	220CHJ
C599	330CHJ	560CHJ
C627	330CHJ	390CHJ
C628	220CHJ	270CHJ
C727	330CHJ	390CHJ
C728	220CHJ	270CHJ
C801	820CHJ	OPEN

Ref.No.	PAL	NTSC
C802	820CHJ	OPEN
C803	201CHJ	OPEN
C804	2.2/50V	OPEN
C805	103XK	OPEN
C810	224FZ	OPEN
C830	561CHJ	OPEN
C831	561CHJ	OPEN
X800	YWAT4R40625G	OPEN
X801	YWDX17R734	YWDX14R318

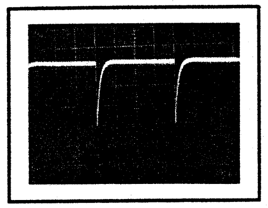
5 6 7 8

WJ-AVE7(PAL) Main 3/3

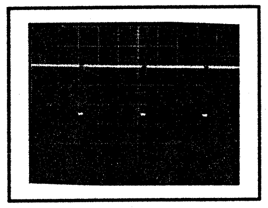
1. 20 µsec/DIV. 0.5V/DIV



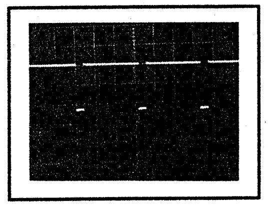
2. 5 msec/DIV. 0.2V/DIV



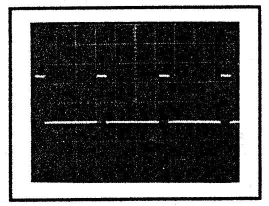
3. 20 µsec/DIV. 2.0V/DIV



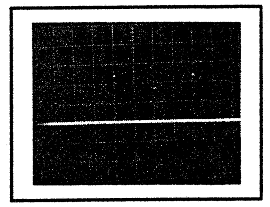
4. 20 µsec/DIV. 2.0V/DIV



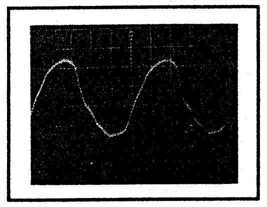
5. 20 nsec/DIV. 2.0V/DIV



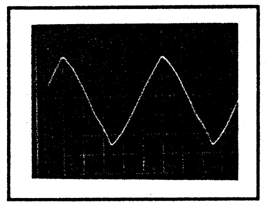
6. 5 msec/DIV. 2.0V/DIV



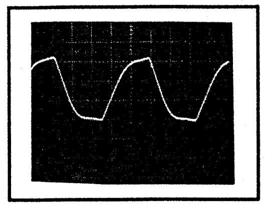
7. 20 nsec/DIV. 0.01V/DIV



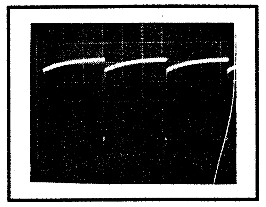
8. 20 nsec/DIV. 1.0V/DIV



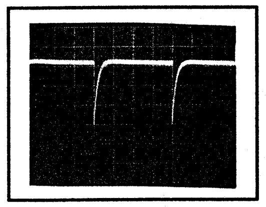
9. 50 nsec/DIV. 0.2V/DIV



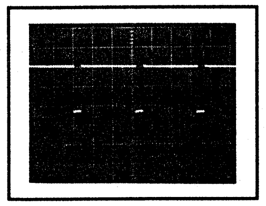
10. 20 µsec/DIV. 0.5V/DIV



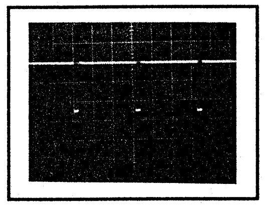
11. 5 msec/DIV. 0.2V/DIV



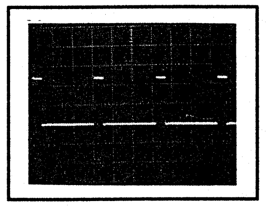
12. 20 µsec/DIV. 2.0V/DIV



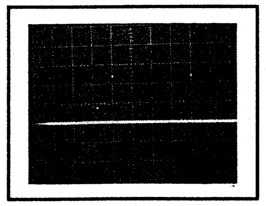
13. 20 µsec/DIV. 2.0V/DIV



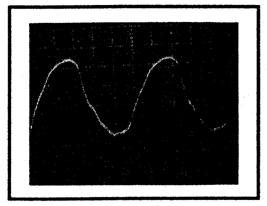
14. 20 µsec/DIV. 2.0V/DIV



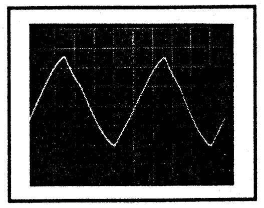
15. 5 msec/DIV. 2.0V/DIV



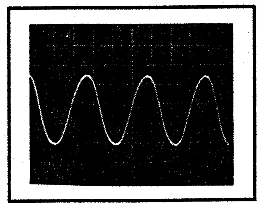
16. 20 nsec/DIV. 0.01V/DIV



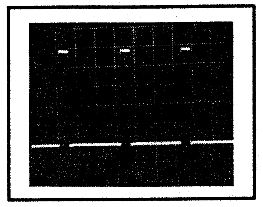
17. 20 nsec/DIV. 1.0V/DIV



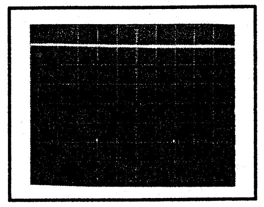
18. 20 nsec/DIV. 0.1V/DIV



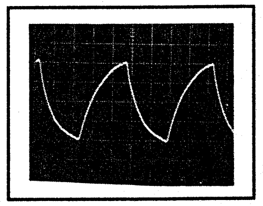
19. 20 µsec/DIV. 1.0V/DIV



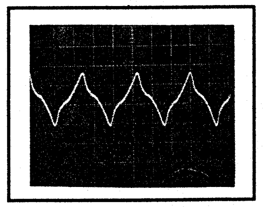
20. 5 msec/DIV. 1.0V/DIV



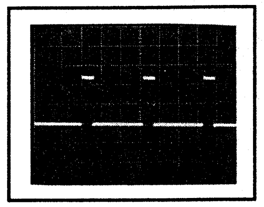
21. 50 nsec/DIV. 1.0V/DIV



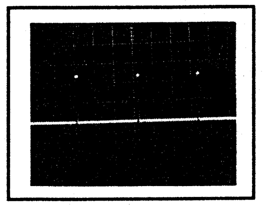
22. 20 nsec/DIV. 0.5V/DIV



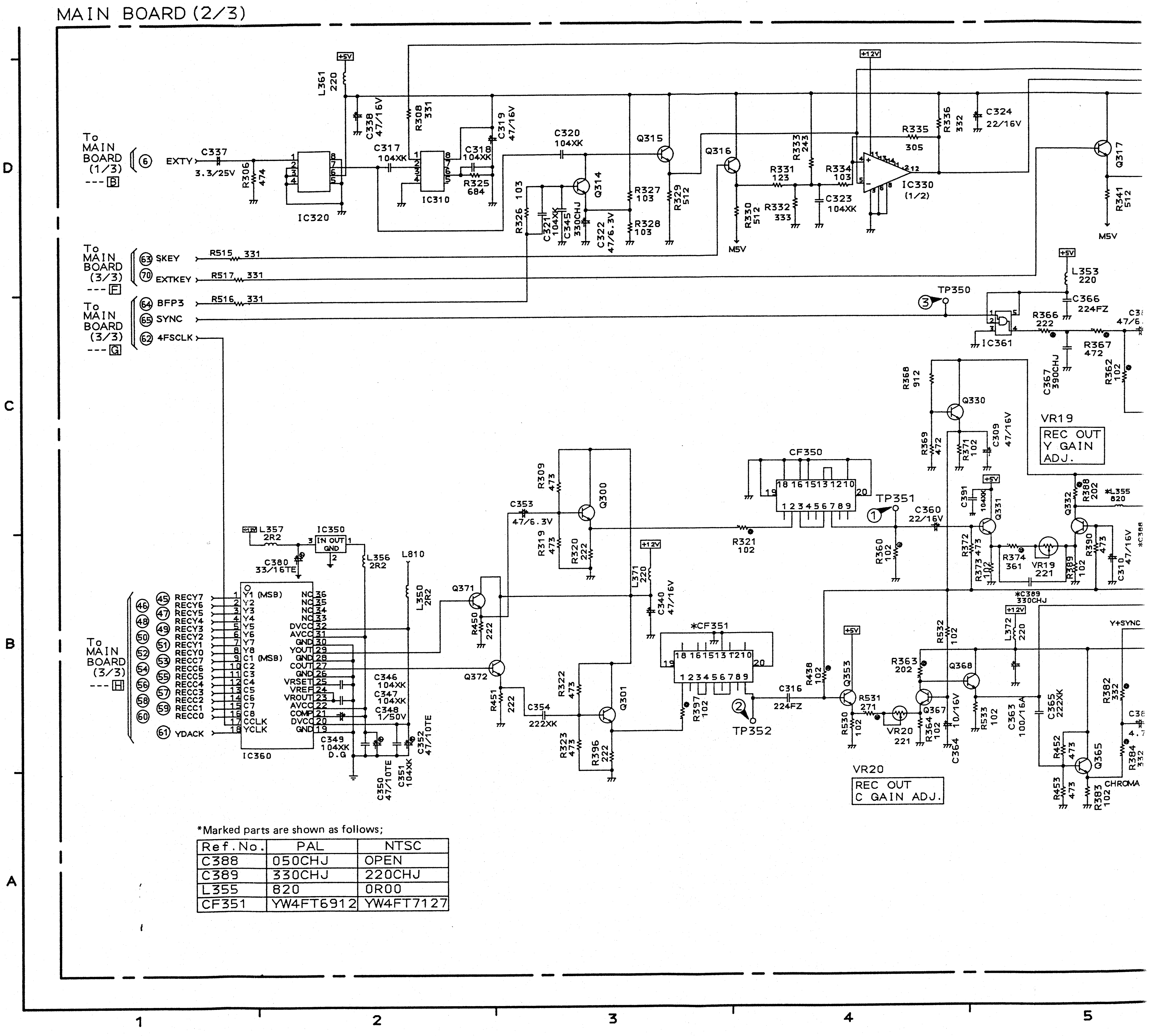
23. 20 µsec/DIV. 2.0V/DIV



24. 20µsec/DIV. 2.0V/DIV



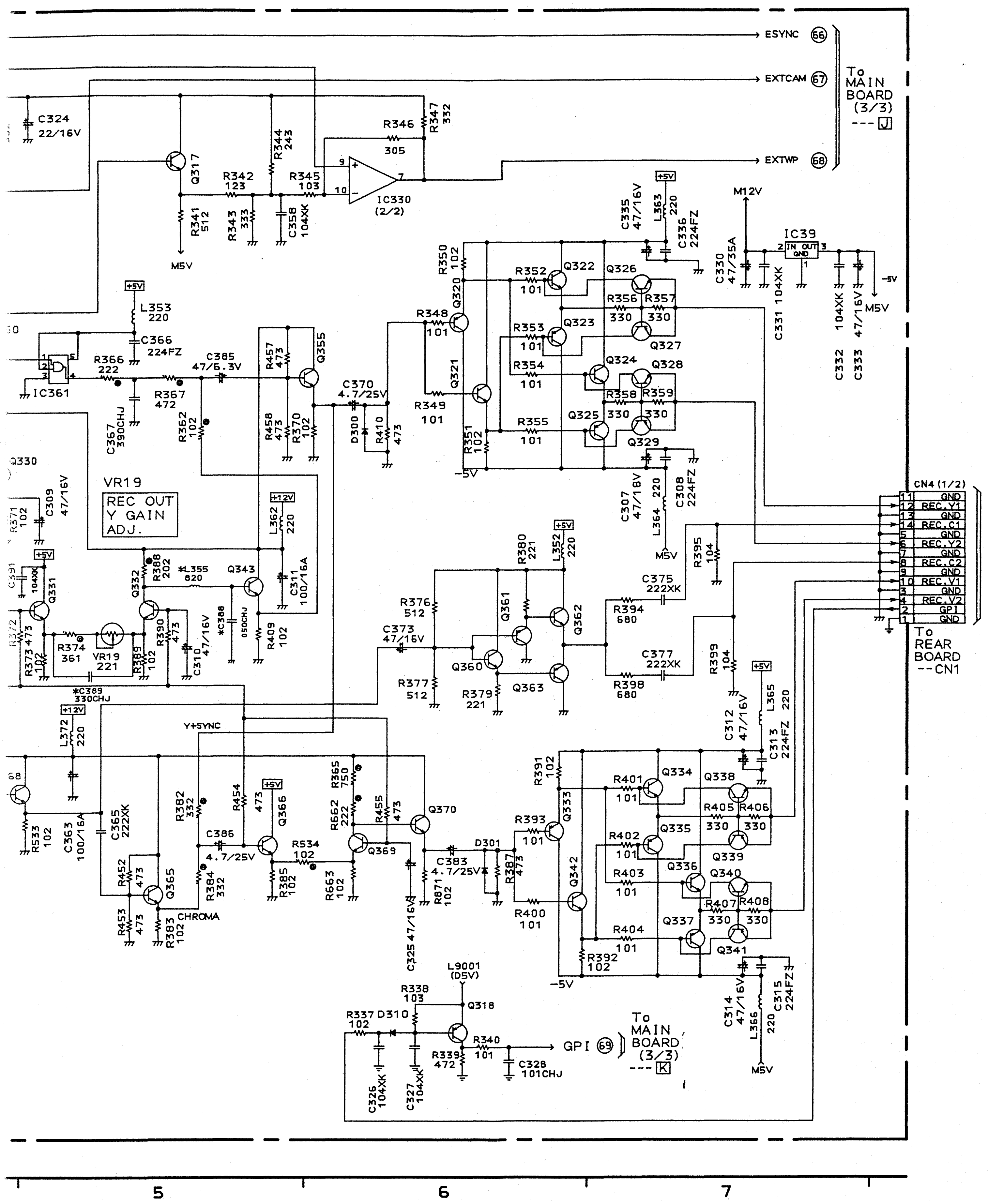
SCHEMATIC DIAGRAM OF MAIN BOARD (2


MAIN BOARD (2/3)
D
C
B
A
1
2
3
4
5
To MAIN BOARD (1/3) B
⑥ EXTY
To MAIN BOARD (3/3) F
(63) SKEY
(70) EXTKEY
To MAIN BOARD (3/3) G
(64) BFP3
(65) SYNC
(62) 4FSCLK
To MAIN BOARD (3/3) H
(45) RECY7
(46) RECY6
(47) RECY5
(48) RECY4
(49) RECY3
(50) RECY2
(51) RECY1
(52) RECY0
(53) RECC7
(54) RECC6
(55) RECC5
(56) RECC4
(57) RECC3
(58) RECC2
(59) RECC1
(60) RECC0
(61) YDACK
C337 3.3/25V
R306 474
L361 220
C338 47/16V
R308 331
C317 104XK
C318 104XK
C319 47/16V
R325 684
IC320
IC310
C320 104XK
Q314
Q315
Q316
Q317
R326 103
C321 104XK
C345 330CHJ
C322 47/6.3V
R327 103
R328 103
R329 512
R330 512
R331 123
R332 333
R333 243
R334 103
C323 104XK
IC330 (1/2)
R335 305
R336 332
C324 22/16V
R341 512
M5V
+5V
+12V
R515 331
R517 331
R516 331
TP350
③
IC361
L353 220
C366 224FZ
R366 222
R367 472
C367 390CHJ
R362 102
R368 912
Q330
R369 472
R371 102
C309 47/16V
VR19
REC OUT Y GAIN ADJ.
CF350
TP351
①
C360 22/16V
C391 104XK
Q331
R360 102
R372 473
R373 102
R374 361
VR19 221
R389 102
R388 202
*L355 820
Q332
R390 473
C310 47/16V
*C389 330CHJ
Y+SYNC
L357 2R2
IC350
IN OUT
GND
C380 33/16TE
L356 2R2
L810
L350 2R2
IC360
Y1 (MSB)
C1 (MSB)
CCLK
YCLK
NC
DVCC
AVCC
GND
YOUT
COUT
VRSET
VREF
VROUT
COMP
C346 104XK
C347 104XK
C348 1/50V
C349 104XK
D.G
C350 47/10TE
C351 104XK
C352 47/10TE
R309 473
C353 47/6.3V
Q300
R319 473
R320 222
Q371
R450 222
Q372
R451 222
C354 222XK
R322 473
R323 473
R396 222
Q301
L371 220
C340 47/16V
R321 102
*CF351
R397 102
TP352
②
C316 224FZ
R438 102
Q353
R530 102
R531 271
VR20 221
Q367
R364 102
C364 10/16V
R363 202
Q368
R532 102
R533 102
L372 220
C363 100/16A
C365 222XK
R382 332
R452 473
R453 473
Q365
R383 102
R384 332
CHROMA
VR20
REC OUT C GAIN ADJ.

*Marked parts are shown as follows;

Ref.No.	PAL	NTSC
C388	050CHJ	OPEN
C389	330CHJ	220CHJ
L355	820	0R00
CF351	YW4FT6912	YW4FT7127

AIN BOARD (2/3)


ESYNC 66
EXTCAM 67
EXTWP 68
To MAIN BOARD (3/3) --- J
C324 22/16V
Q317
R342 123
R344 243
R345 103
R346 305
R347 332
R341 512
R343 333
C358 104XK
IC330 (2/2)
M5V
M12V
IC39
IN OUT GND
C335 47/16V
L363 220
C336 224FZ
C330 47/35A
C331 104XK
C332 104XK
C333 47/16V
-5V
M5V
L353 220
C366 224FZ
R366 222
C385 47/6.3V
R367 472
IC361
C367 390CHJ
R362 102
R457 473
Q355
R458 473
R370 102
C370 4.7/25V
D300
R410 473
R350 102
Q320
R348 101
Q321
R349 101
R351 102
R352 101
Q322
Q326
R356 330
R357 330
R353 101
Q323
Q327
R354 101
Q324
Q328
R358 330
R359 330
R355 101
Q325
Q329
C307 47/16V
L364 220
C308 224FZ
Q330
VR19
REC OUT Y GAIN ADJ.
C309 47/16V
R371 102
Q331
Q332
R388 202
*L355 820
Q343
L362 220
C311 100/16A
R390 473
C310 47/16V
*C388 050CHJ
R409 102
R374 361
VR19 221
R389 102
R373 102
*C389 330CHJ
L372 220
Y+SYNC
R533 102
C363 100/16A
C365 222XK
R382 332
R454 473
Q366
R365 750
R662 222
R455 473
Q370
C386 4.7/25V
R534 102
Q369
R452 473
Q365
R384 332
R385 102
R663 102
R453 473
R383 102
CHROMA
R376 512
C373 47/16V
R377 512
Q360
R379 221
Q363
Q361
Q362
R380 221
L352 220
R394 680
C375 222XK
R395 104
C377 222XK
R398 680
R399 104
C312 47/16V
L365 220
C313 224FZ
CN4 (1/2)
GND
REC.Y1
GND
REC.C1
GND
REC.Y2
GND
REC.C2
GND
REC.V1
GND
REC.V2
GPI
GND
To REAR BOARD --CN1
R391 102
R393 101
Q333
R401 101
Q334
Q338
R405 330
R406 330
R402 101
Q335
Q339
D301
C383 4.7/25V
R871 102
R387 473
Q342
R403 101
Q336
Q340
R407 330
R408 330
R400 101
R404 101
Q337
Q341
R392 102
C325 47/16V
L9001 (D5V)
R338 103
Q318
R337 102
D310
R340 101
R339 472
C328 101CHJ
C326 104XK
C327 104XK
GPI 69
To MAIN BOARD (3/3) --- K
C314 47/16V
L366 220
C315 224FZ
M5V
5
6
7

MAIN BOARD (2/3)

IC39	D7
IC310	D2
IC320	D2
IC330	D4,D6
IC350	B2
IC360	B1
IC361	C5
Q300	C3
Q301	B3
Q314	D3
Q315	D3
Q316	D3
Q317	D5
Q318	A6
Q320	D6
Q321	C6
Q322	D6
Q323	D6
Q324	C7
Q325	C7
Q326	D7
Q327	C7
Q328	C7
Q329	C7
Q330	C4
Q331	C5
Q332	C5
Q333	B6
Q334	B7
Q335	B7
Q336	B7
Q337	A7
Q338	B7
Q339	B7
Q340	B7
Q341	A7
Q342	B6
Q343	C5
Q353	B4
Q355	C5
Q360	B6
Q361	B6
Q362	B6
Q363	B6
Q365	B5
Q366	B5
Q367	B4
Q368	B4
Q369	B6
Q370	B6
Q371	B2
Q372	B2
D300	C6
D301	B6
D310	A6

MAIN BOARD(2/3)

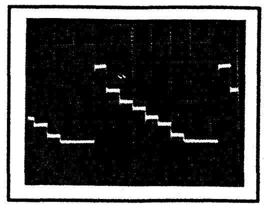
	IC39	IC310	IC320	IC330	IC350	IC361
Pin 1	0	0	2.0	0	5.1	4.5
2	-12.0	1.6	0	0	0	5.0
3	-5.0	0	0	0	12.0	0
4		0	0	1.0		4.6
5		4.8	0	1.9		5.0
6		1.3	4.8	0		
7		0.1	1.4	4.3		
8		4.8	0	0		
9				1.9		
10				1.2		
11				12.0		
12				0.2		
13				0		
14				0		

IC360			
Pin 1	0.1	Pin19	0
2	0.1	20	4.9
3	0.1	21	3.3
4	0	22	5.1
5	0	23	4.1
6	0	24	4.1
7	0	25	3.7
8	0	26	0
9	4.8	27	4.6
10	0.1	28	0
11	0.2	29	4.1
12	0	30	0
13	0	31	5.1
14	0	32	4.9
15	0	33	0
16	0	34	0
17	2.3	35	0
18	2.3	36	0

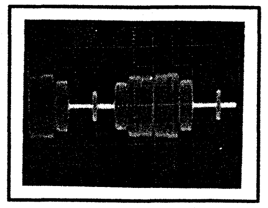
	B	C	E		B	C	E		B	C	E
Q300	5.7	11.9	5.1	Q328	0.2	0.8	0.2	Q343	6.7	11.9	6.0
301	5.8	11.9	5.2	329	0.2	-0.4	0.2	353	3.4	5.0	2.8
314	0	2.5	2.5	330	4.0	11.9	3.4	355	5.6	11.9	5.1
315	2.5	4.8	1.9	331	3.1	5.0	2.5	360	2.5	4.9	1.8
316	0	4.8	-0.6	332	3.1	6.7	2.5	361	2.5	0	3.1
317	0.3	4.8	-0.3	333	0.2	-4.9	0.8	362	3.1	4.9	2.5
318	4.9	0	4.9	334	0.8	4.9	0.2	363	1.8	0	2.5
320	0.2	-4.9	0.8	335	-0.4	-4.9	0.2	365	5.7	11.9	5.1
321	0.2	4.9	-0.4	336	0.8	4.9	0.2	366	3.1	5.0	2.5
322	0.8	4.9	0.2	337	-0.4	-4.9	0.2	367	3.4	6.1	2.8
323	-0.4	-4.9	0.2	338	0.2	0.8	0.2	368	6.1	11.9	5.5
324	0.8	4.9	0.2	339	0.2	-0.4	0.2	369	3.1	6.3	2.6
325	-0.4	-4.9	0.2	340	0.1	0.8	0.1	370	6.2	11.9	5.7
326	0.2	0.8	0.2	341	0.1	-0.4	0.1	371	4.0	11.9	3.4
327	0.2	-0.4	0.2	342	0.2	4.9	-0.4	372	4.5	11.9	4.0

Main 2/3

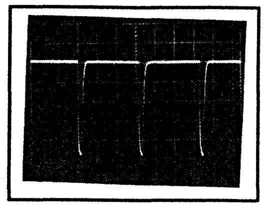
1. 10 μsec/DIV. 0.1V/DIV



2. 10 μsec/DIV. 50mV/DIV

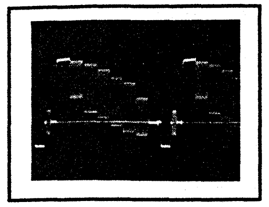


3. 20 μsec/DIV. 1.0V/DIV

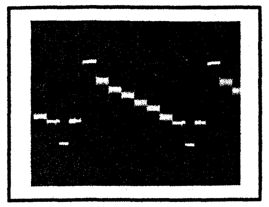


WJ-AVE7(PAL) Main 1/3

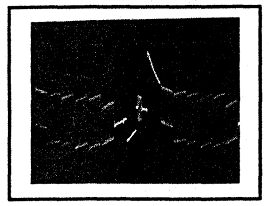
1. 10 µsec/DIV.0.2V/DIV



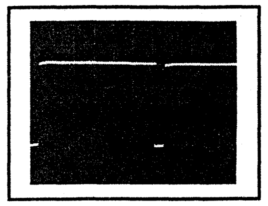
2. 10 µsec/DIV.0.1V/DIV



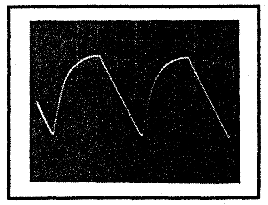
3. 10 µsec/DIV.0.1V/DIV



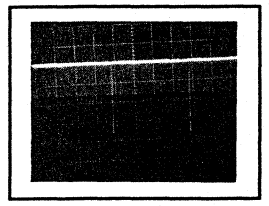
4. 10 µsec/DIV.1.0V/DIV



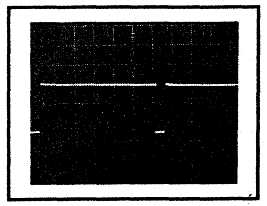
5. 10 nsec/DIV.0.1V/DIV



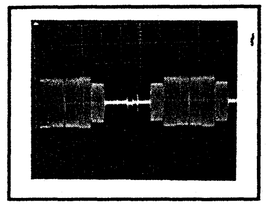
6. 10 µsec/DIV.0.5V/DIV



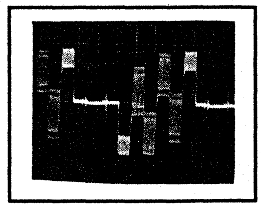
7. 10 µsec/DIV.2.0V/DIV



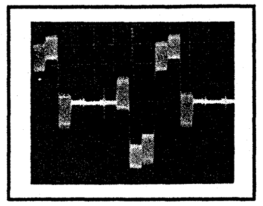
8. 10 µsec/DIV.0.1V/DIV



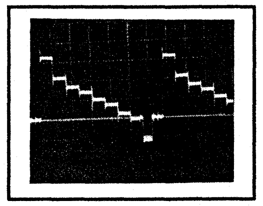
9. 10 µsec/DIV.0.1V/DIV



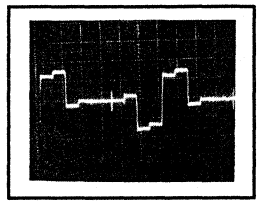
10. 10 µsec/DIV.0.1V/DIV



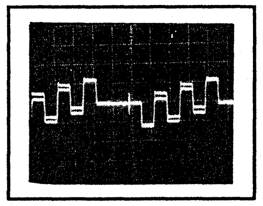
11. 10 µsec/DIV.0.5V/DIV



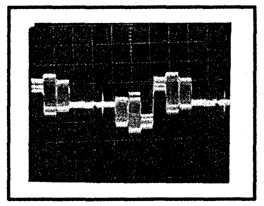
12. 10 µsec/DIV.0.5V/DIV



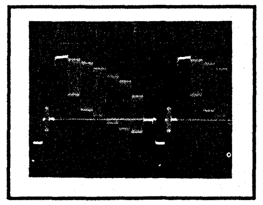
13. 10 µsec/DIV.0.5V/DIV



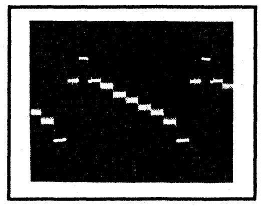
14. 10 µsec/DIV.0.5V/DIV



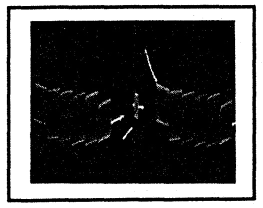
15. 10 µsec/DIV.0.2V/DIV



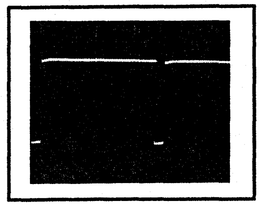
16. 10 µsec/DIV.0.1V/DIV



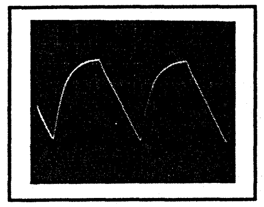
17. 10 µsec/DIV.0.1V/DIV



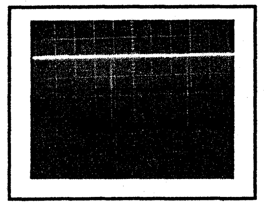
18. 10 µsec/DIV.1.0V/DIV



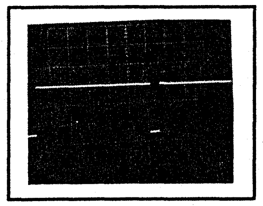
19. 10 nsec/DIV.0.1V/DIV



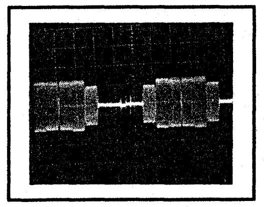
20. 10 µsec/DIV.0.5V/DIV



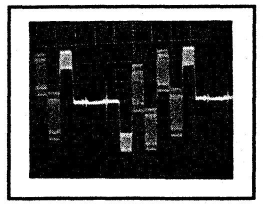
21. 10 µsec/DIV.2.0V/DIV



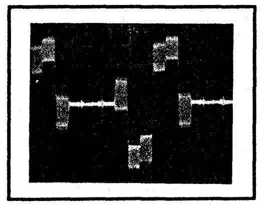
22. 10 µsec/DIV.0.1V/DIV



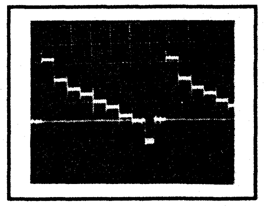
23. 10 µsec/DIV.0.1V/DIV



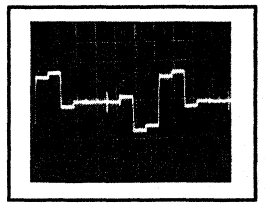
24. 10µsec/DIV.0.1V/DIV



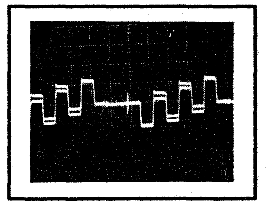
25. 10 µsec/DIV.0.5V/DIV



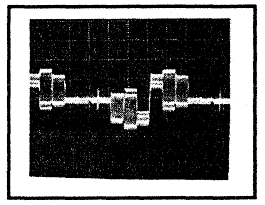
26. 10 µsec/DIV.0.5V/DIV



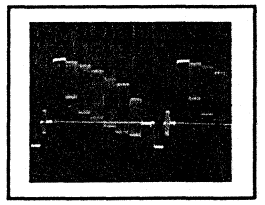
27. 10 µsec/DIV.0.5V/DIV



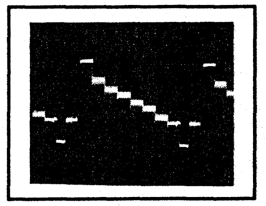
28. 10 µsec/DIV.0.5V/DIV



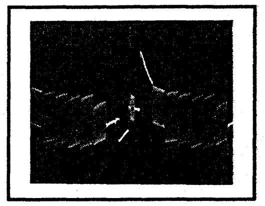
29. 10 µsec/DIV.0.2V/DIV



30. 10 µsec/DIV.0.1V/DIV



31. 10 µsec/DIV.0.1V/DIV



MAIN BOARD(1/3)

	IC1	IC28	IC35	IC36	IC100	IC102	IC103	IC104	IC105	IC107	IC110	IC111	IC120	IC121	IC131
Pin 1	1.7	5.0	3.3	3.3	1.9	2.6	4.2	5.0	0.2	5.0	5.0	2.0	0	0	5.0
2	0	2.6	3.0	3.0	0	0	0.1	0	3.6	0.1	2.6	2.0	4.7	4.7	0.1
3	1.3	2.0	3.0	3.0	1.9	2.7	0	12.0	2.3	0	2.0	0	3.0	3.0	0
4	1.2	5.0	5.0	5.0	0	0	0		2.4	0	5.0	0	0	0	0.2
5	1.2	2.6	2.6	2.6	1.9	2.7	5.0		3.0	5.0	2.6	0	0	0	5.0
6	1.4	2.0	2.6	2.6	4.5	4.5			3.0		2.0	0	0	4.7	
7	4.7		2.6	2.6	1.3	1.9			4.7			0	0	0.1	
8	1.7		2.6	2.6	0	0			3.0			0	0	0.1	
9			2.6	2.6					3.0			0	0	0.1	
10			2.6	2.6					2.8			2.3	0	0.1	
11			0	0					2.4			0	4.7	4.7	
12			2.6	2.6					3.3			0	0	0	
13			2.6	2.6					0			0	2.3	2.3	
14			2.6	2.6					2.9			0	0	0.1	
15									5.0			2.0	0	0.1	
16									2.9			5.0	0	0	
17									0				0	0	
18									4.1				1.0	1.0	
19									2.1				0	0	
20									2.1				4.7	4.7	
21									0				0	0	
22									2.8				1.0	2.0	
23									0						
24									0						
25									2.9						
26									2.5						
27									2.5						
28									0.1						

	IC201	IC203	IC204	IC205	IC207	IC208	IC211	IC220	IC221	IC231	IC250	IC251
Pin 1	1.9	2.7	5.0	0.2	5.0	4.2	2.0	0	0	5.0	1.6	1.6
2	4.8	4.8	0	3.6	0.1	0.1	2.0	4.7	4.7	0.1	1.6	1.6
3	1.9	2.7	12.0	2.3	0	0	0	3.0	3.0	0	1.6	1.6
4	0	0		2.4	0	0	0	0	0	0.2	0	0
5	1.9	2.7		3.0	5.0	5.0	0	0	0	5.0	1.0	1.0
6	4.5	4.5		3.0			0	0	4.7		1.0	1.0
7	1.2	1.9		4.7			0	0	0.1		0.8	0.8
8	0	0		3.0			0	0	0.1		5.0	5.0
9				3.0			0	0	0.1			
10				2.8			2.4	0	0.1			
11				2.4			0	4.7	4.7			
12				3.3			0	0	0			
13				0			0	2.3	2.3			
14				2.9			0	0	0.1			
15				5.0			2.0	0	0.1			
16				2.9			5.0	0	0			
17				0				0	0			
18				4.1				1.0	1.0			
19				2.1				0	0			
20				2.1				4.7	4.7			
21				0				0	0			
22				2.8				1.0	2.0			
23				0								
24				0								
25				2.9								
26				2.5								
27				2.5								
28				0.1								

	B	C	E		B	C	E		B	C	E		B	C	E
Q10	2.9	5.0	2.3	Q33	3.4	5.0	2.8	Q101	0.1	1.6	1.6	Q120	5.8	11.3	5.1
11	5.0	0	3.4	34	3.4	5.0	2.8	102	-0.1	2.6	2.6	121	1.0	0	1.7
12	2.8	5.0	2.2	35	2.0	5.0	2.8	103	-0.1	2.6	2.6	122	3.1	5.0	2.5
13	3.4	5.0	2.8	36	2.0	5.0	2.8	104	2.0	0	2.6	123	3.1	6.4	2.5
14	3.4	5.0	2.8	50	1.2	5.0	0.7	105	-0.1	2.6	2.6	124	6.4	11.3	5.8
15	2.0	5.0	2.8	80	3.4	5.8	2.8	110	0.3	0	1.0	125	5.8	11.3	5.1
16	2.0	5.0	2.8	81	5.8	12.0	5.1	111	3.1	5.0	2.5	126	3.8	11.3	3.2
20	2.9	5.0	2.3	82	3.4	5.9	2.8	112	3.1	6.4	2.5	127	2.6	5.0	2.0
21	5.0	0	3.4	83	5.9	12.0	5.3	113	6.4	11.3	5.8	130	2.5	5.0	1.9
23	3.4	5.0	2.8	84	3.4	6.0	2.8	114	5.8	0	6.4	131	2.5	5.0	1.8
24	3.4	5.0	2.8	85	6.0	12.0	5.3	115	1.6	5.0	1.0	136	1.3	5.0	0.7
25	2.0	5.0	2.8					116	1.0	0	1.7	140	1.6	3.0	1.0
26	2.0	5.0	2.8					117	3.1	5.0	2.5	141	3.6	5.0	3.0
30	3.2	5.0	2.5					118	3.1	6.4	2.5	151	1.6	3.0	1.0
31	5.0	0	3.4					119	6.4	11.3	5.8				

	B	C	E		B	C	E
Q201	0.1	1.6	1.6	Q220	5.8	11.3	5.1
202	-0.1	2.6	2.6	221	1.0	0	1.7
203	-0.1	2.6	2.6	222	3.1	5.0	2.5
204	2.0	0	2.6	223	3.1	6.4	2.5
205	-0.1	2.6	2.6	224	6.3	11.3	5.7
206	2.6	5.0	2.0	225	5.7	11.3	5.1
210	0.3	0	1.0	226	3.8	11.3	3.2
211	3.1	5.0	2.0	310	3.6	5.0	3.0
212	3.1	6.4	2.5				
213	6.4	11.3	5.8				
214	5.8	0	6.4				
215	1.6	5.0	1.0				
216	1.0	0	1.7				
217	3.1	5.0	2.5				
218	3.1	6.4	2.5				
219	6.4	11.3	5.8				

MAIN BOARD(3/3)

IC552							
Pin 1	0	Pin41	0	Pin81	0	Pin121	0
2	0	42	0	82	0	122	0
3	4.8	43	4.8	83	0	123	4.8
4	0	44	0	84	0	124	0
5	4.8	45	0	85	0	125	2.3
6	1.2	46	2.1	86	2.2	126	0
7	0.2	47	2.1	87	0	127	0
8	2.4	48	2.1	88	2.3	128	0
9	2.4	49	2.1	89	4.8	129	0
10	4.8	50	0	90	0	130	0
11	2.3	51	2.0	91	0	131	0
12	0	52	2.0	92	2.3	132	0
13	0.8	53	2.0	93	2.3	133	0
14	0.1	54	2.0	94	0	134	4.8
15	4.6	55	4.8	95	4.8	135	4.2
16	4.6	56	0	96	4.8	136	4.2
17	0.1	57	0	97	4.8	137	0
18	0.1	58	0	98	0	138	4.8
19	4.6	59	0	99	0	139	0.1
20	4.8	60	0	100	4.8	140	0.2
21	0	61	0	101	0	141	0
22	4.8	62	0	102	0	142	0
23	0	63	0	103	0	143	0
24	0.1	64	4.8	104	0	144	0
25	0.1	65	4.9	105	0	145	0
26	0.1	66	4.9	106	0	146	4.8
27	0.1	67	4.9	107	0	147	0
28	0	68	4.9	108	4.8	148	0
29	0	69	4.8	109	2.3	149	0
30	0	70	0	110	0	150	0
31	0	71	0	111	0	151	0
32	4.8	72	0	112	0	152	0
33	0	73	0	113	0	153	0
34	2.2	74	0	114	0	154	0
35	2.2	75	0	115	0	155	0
36	2.2	76	0	116	0	156	4.8
37	2.2	77	0	117	4.8	157	4.8
38	0	78	0	118	0	158	0
39	0	79	0	119	0	159	0
40	0	80	0	120	0	160	0

IC580							
Pin 1	0	Pin41	0	Pin81	0	Pin121	0
2	0	42	0	82	0	122	0
3	0	43	0	83	0	123	0
4	4.9	44	4.9	84	0	124	0
5	3.8	45	0	85	0	125	0
6	3.8	46	4.9	86	0	126	0
7	3.8	47	4.9	87	0	127	4.9
8	3.8	48	0	88	0	128	4.9
9	4.4	49	0	89	0	129	4.9
10	2.3	50	0	90	0	130	0
11	0	51	0	91	0	131	4.9
12	0	52	0	92	0	132	4.9
13	0	53	0	93	0	133	0
14	0	54	0	94	0	134	0
15	0	55	0	95	4.9	135	0
16	0.8	56	0	96	4.9	136	0
17	0	57	0	97	0	137	0
18	0	58	0	98	0	138	0
19	0	59	4.9	99	0	139	0
20	1.7	60	0	100	4.9	140	0
21	0	61	0	101	0	141	0
22	0	62	0.1	102	0	142	2.0
23	0	63	0.1	103	0	143	0
24	0	64	0.1	104	0	144	4.9
25	0	65	0.1	105	0	145	2.0
26	0	66	0	106	0	146	2.0
27	0	67	0	107	0.2	147	2.0
28	0	68	0	108	0	148	2.1
29	0	69	0	109	0	149	2.1
30	0	70	0	110	4.9	150	0
31	0	71	4.7	111	4.7	151	2.1
32	4.9	72	4.7	112	0	152	2.1
33	0	73	0.1	113	4.7	153	0
34	2.4	74	0.1	114	4.8	154	2.2
35	0	75	4.6	115	0	155	2.2
36	2.4	76	4.6	116	2.2	156	2.2
37	2.4	77	0	117	2.3	157	2.2
38	4.9	78	4.9	118	4.9	158	4.9
39	0	79	0	119	0	159	0
40	0	80	0	120	0	160	0

	IC581
Pin 1	3.8
2	3.8
3	3.8
4	3.8
5	0
6	4.4
7	0
8	2.3
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0
17	2.3
18	4.9
19	4.4
20	0
21	3.8
22	3.8
23	3.8
24	4.9

	IC501	IC502	IC503	IC510
Pin 1	4.9	4.9	8.9	4.9
2	1.0	4.5	0	4.0
3	0	0	12.0	0
4	0	4.5		4.9
5	4.9	4.9		4.9

	B	C	E
O541	0	4.9	0
	G	D	S
Q580	2.4	4.8	2.8

IC700									
Pin 1	0	Pin31	0	Pin61	0.1	Pin91	0.1	Pin121	4.7
2	2.2	32	0	62	0	92	0	122	0.1
3	4.6	33	2.3	63	0	93	0	123	0.1
4	0	34	4.7	64	0	94	4.8	124	0.1
5	0	35	0.1	65	0	95	4.8	125	0.1
6	4.2	36	0.1	66	0	96	0.2	126	0.1
7	0.1	37	4.8	67	0	97	0.1	127	0.1
8	0	38	0	68	0	98	0.2	128	0
9	0.8	39	0.1	69	0	99	0.2	129	4.7
10	0	40	0.1	70	0	100	0.2	130	0
11	0	41	0	71	0	101	4.8	131	0
12	0	42	0	72	4.8	102	4.8	132	4.7
13	0	43	0	73	0	103	0	133	4.7
14	4.9	44	0	74	4.8	104	0	134	0
15	2.2	45	4.7	75	0	105	2.4	135	0
16	2.3	46	4.7	76	3.7	106	0.1	136	0
17	2.4	47	0.1	77	3.7	107	0.1	137	0
18	4.8	48	0.1	78	3.7	108	0.1	138	0
19	4.8	49	4.6	79	1.0	109	0	139	0
20	0	50	4.6	80	1.0	110	0	140	0
21	0	51	0	81	1.0	111	4.8	141	0
22	0	52	4.4	82	4.8	112	0	142	0
23	0	53	4.4	83	0	113	0	143	0
24	0	54	0	84	0.9	114	0	144	4.7
25	4.8	55	0	85	0.9	115	0	145	2.3
26	0	56	4.8	86	0.9	116	0	146	0
27	0	57	4.8	87	4.5	117	0	147	2.4
28	0	58	4.4	88	4.5	118	0	148	4.8
29	0	59	2.0	89	0.1	119	2.4		
30	0	60	0.1	90	0.2	120	2.3		

	IC701	IC702	IC703	IC704	IC705	IC707
Pin 1	0	0	0	0.2	0.2	4.8
2	2.4	0	0	0.2	0.2	0.8
3	0	0	0	2.1	2.1	0
4	2.4	0	0	0.4	0.4	0.8
5	4.9	0	0	0.4	0.4	4.8
6		0	0	2.4	2.4	
7		0.2	0.2	0.2	0.2	
8		0.2	0.2	0.2	0.2	
9		0.2	0.2	0.2	0.2	
10		0.1	0.1	0.1	0.1	
11		0.2	0.2	0.2	0.2	
12		0.1	0.1	0.1	0.1	
13		0.2	0.2	0.2	0.2	
14		0.1	0.1	0.1	0.1	
15		4.5	4.5	4.5	4.5	
16		4.5	4.5	4.5	4.5	
17		1.0	1.0	1.0	1.0	
18		1.0	1.0	1.0	1.0	
19		0	0	0	0	
20		3.7	3.7	3.7	3.7	
21		4.8	4.8	4.8	4.8	
22		0	0	0	0	
23		0	0	0	0	
24		0	0	0	0	
25		0	0	0.1	0.1	
26		0	0	0	0	
27		0	0	0	0	
28		0	0	0.1	0.1	

	B	C	E
O701	4.2	4.9	4.9
	G	D	S
Q702	4.6	4.7	4.6

IC600									
Pin 1	0	Pin31	0	Pin61	0	Pin91	0.1	Pin121	4.7
2	2.2	32	0	62	0	92	0	122	0.1
3	4.6	33	2.3	63	0	93	0	123	0.1
4	0	34	4.7	64	0	94	4.8	124	0.1
5	0	35	0.1	65	0	95	4.8	125	0.1
6	4.2	36	0.1	66	0	96	0.2	126	0.1
7	0.1	37	4.8	67	0	97	0.1	127	0.1
8	0	38	0	68	0	98	0.2	128	0
9	0.8	39	0.1	69	0	99	0.2	129	4.7
10	0	40	0.1	70	0	100	0.2	130	0
11	0	41	0	71	0	101	4.8	131	0
12	0	42	0	72	4.8	102	4.8	132	4.7
13	0	43	0	73	0	103	0	133	4.7
14	4.9	44	0	74	4.8	104	0	134	0
15	2.2	45	4.7	75	0	105	2.4	135	0
16	2.3	46	4.7	76	3.7	106	0.1	136	0
17	2.4	47	0.1	77	3.7	107	0.1	137	0
18	4.8	48	0.1	78	3.7	108	0	138	0
19	4.8	49	4.6	79	1.0	109	0	139	0
20	0	50	4.6	80	1.0	110	0	140	0
21	4.8	51	0	81	1.0	111	4.8	141	0
22	0	52	4.4	82	4.8	112	0	142	0
23	0	53	4.4	83	0	113	0	143	0
24	0	54	0	84	0.9	114	0	144	4.7
25	4.8	55	0	85	0.9	115	0	145	2.3
26	0	56	4.8	86	0.9	116	0	146	0
27	0	57	4.8	87	4.5	117	0	147	2.4
28	0	58	4.4	88	4.5	118	0	148	4.8
29	0	59	2.0	89	0.1	119	2.4		
30	0	60	0	90	0.2	120	2.3		

	IC601	IC602	IC603	IC604	IC605
Pin 1	0	0	0	0	0
2	2.4	0	0	0	0
3	0	0	0	2.0	2.0
4	2.4	0	0	0.1	0.1
5	4.9	0	0	0.1	0.1
6		0	0	2.4	2.4
7		0.2	0.2	0.2	0.2
8		0.2	0.2	0.2	0.2
9		0.2	0.2	0.2	0.2
10		0.1	0.1	0.1	0.1
11		0.2	0.2	0.2	0.2
12		0.1	0.1	0.1	0.1
13		0.2	0.2	0.2	0.2
14		0.1	0.1	0.1	0.1
15		4.5	4.5	4.5	4.5
16		4.5	4.5	4.5	4.5
17		1.0	1.0	1.0	1.0
18		1.0	1.0	1.0	1.0
19		0	0	0	0
20		3.7	3.7	3.7	3.7
21		4.8	4.8	4.8	4.8
22		0	0	0	0
23		0	0	0	0
24		0	0	0	0
25		0	0	0	0
26		0	0	0	0
27		0	0	0	0
28		0	0	0	0

	B	C	E
O601	4.2	4.8	4.8
	G	D	S
Q602	4.6	4.7	4.6

	IC800	IC801	IC802	IC804	IC805	IC810	IC811	IC901	IC902	IC903	IC904
Pin 1	4.9	0	4.7	0	0	0	4.9	0	0	5.1	0
2	0	2.4	1.8	4.9	0	0	0.1	0	4.7	0	0
3	2.3	0	0	0	0	0	0	0	0	11.9	0
4	0	2.5	0	0	0	4.8	0.2	0	0		0
5	4.8	4.9	0	0	4.9	4.9	4.9	0	4.7		1.2
6	2.4		0	0				0	0		5.0
7	2.4		0	4.8				4.9	0		5.0
8	0.1		0	0				0	0		0
9	0		0	4.8				4.9	0		
10	0		0	0				4.9	0		
11	0		0	4.9				4.9	0		
12	2.4		0	0.8				0	4.8		
13	4.9		0	4.9				0	0.1		
14	2.5		0	4.8				0	0.1		
15	4.9		1.8	0				0	4.8		
16	0		4.8	4.9				0	0.1		
17	4.8							5.0	0.1		
18	4.1							0	0.1		
19	0.2							0	0.1		
20	3.2							0	4.9		
21	0.2										
22	0.1										
23	1.2										
24	0.8										
25	0.1										
26	4.4										
27	0										
28	4.8										

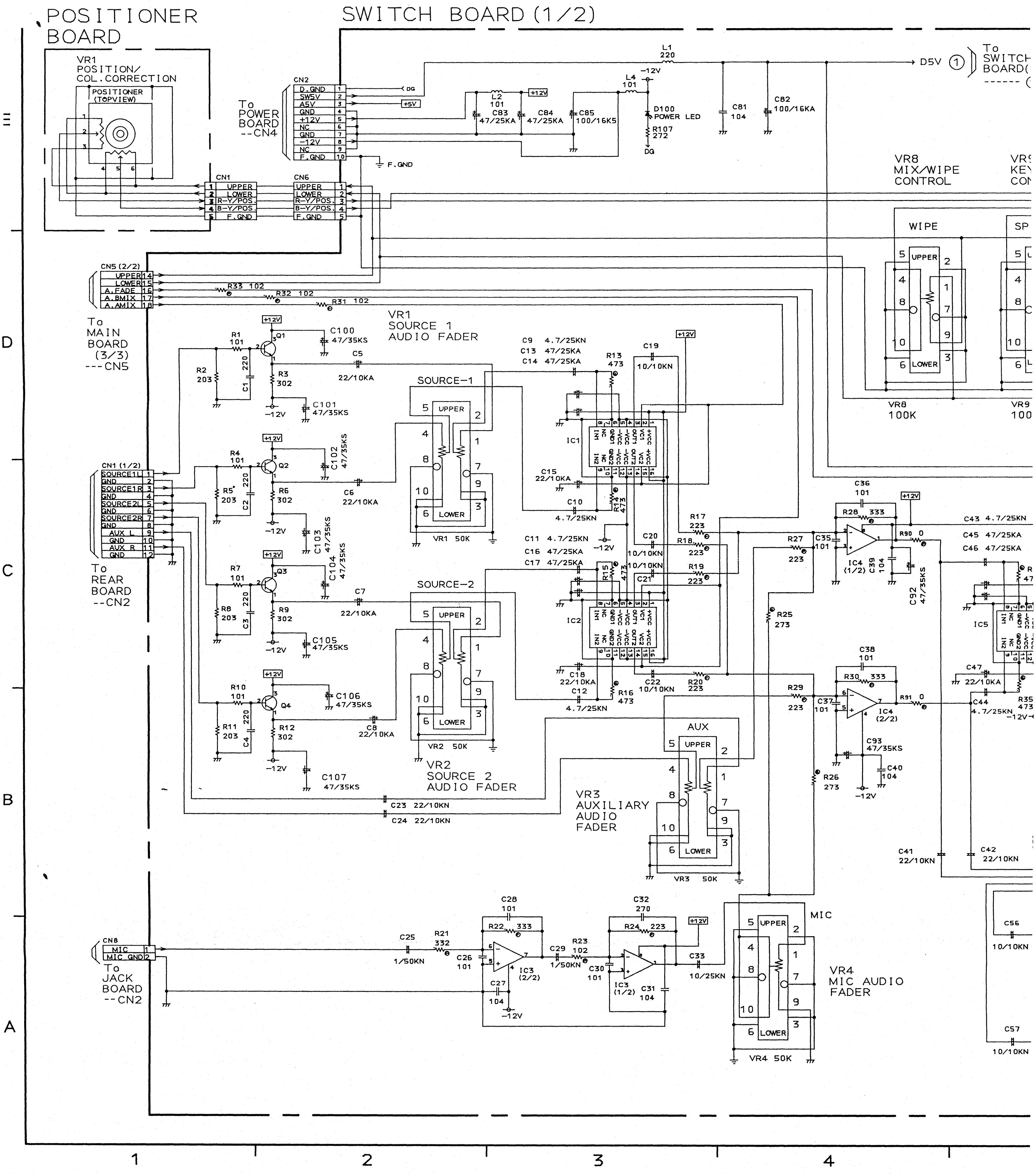
	IC803
Pin 1	2.5
2	0
3	2.3
4	0
5	0
6	2.9
7	0
8	1.9
9	4.8
10	3.0
11	0
12	0
13	0
14	0
15	4.9
16	4.9
17	4.9
18	0
19	0
20	0.8
21	0.8
22	0.8
23	4.8
24	4.7
25	0
26	4.9
27	0
28	0
29	0
30	0
31	4.9
32	0
33	4.8
34	0
35	0
36	0
37	0
38	0
39	0
40	0

	IC803
Pin41	4.8
42	0
43	1.3
44	2.3

IC900			
Pin 1	5.0	Pin41	0
2	2.3	42	1.3
3	2.2	43	1.2
4	5.0	44	1.3
5	5.0	45	0
6	0	46	2.4
7	5.0	47	5.0
8	5.0	48	1.2
9	1.0	49	0
10	5.0	50	1.3
11	0	51	0
12	0	52	0
13	1.3	53	1.2
14	2.5	54	1.3
15	1.2	55	0
16	1.3	56	0
17	1.2	57	0
18	0	58	0
19	5.0	59	0.1
20	0	60	0
21	0.8	61	0.1
22	0	62	0.1
23	0	63	0.1
24	0	64	0.1
25	0	65	0
26	0	66	0
27	5.0	67	0
28	4.8	68	0
29	5.0	69	0
30	0	70	5.0
31	0.3	71	0
32	2.4	72	0
33	0	73	0
34	0	74	0.1
35	5.0	75	0.1
36	4.3	76	0
37	0.1	77	4.9
38	0	78	0.1
39	0	79	4.9
40	2.4	80	0

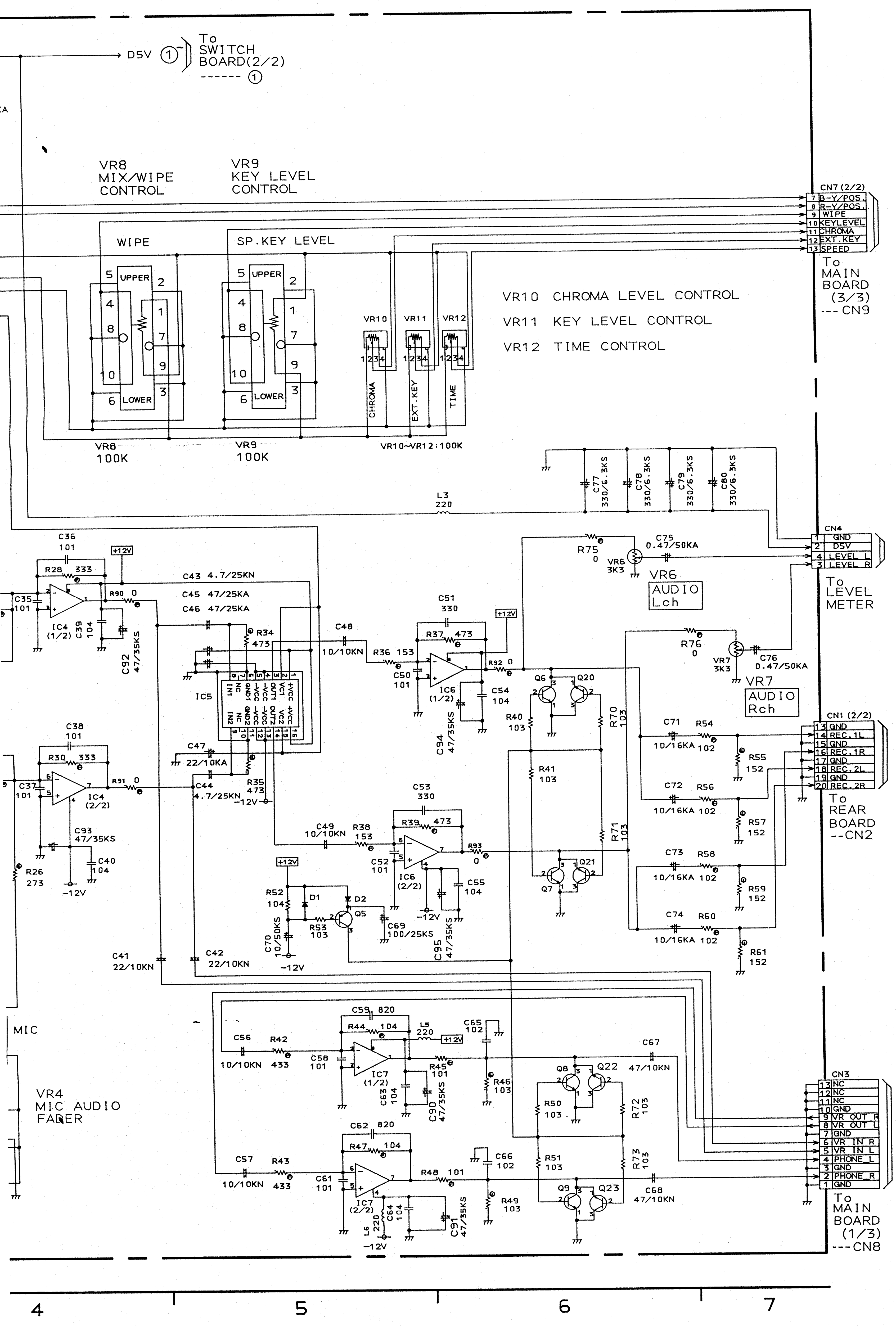
	G	D	S
O800	1.3	4.8	1.7
801	4.7	4.8	4.7
	B	C	E
Q991	11.3	11.9	12.0
995	4.9	0	4.9

SCHEMATIC DIAGRAM OF SWITCH BOARD (1/2)



POSITIONER BOARD
VR1 POSITION/ COL.CORRECTION
POSITIONER (TOPVIEW)
SWITCH BOARD (1/2)
CN1
1 UPPER
2 LOWER
3 R-Y/POS.
4 B-Y/POS.
5 F.GND
CN6
UPPER 1
LOWER 2
R-Y/POS. 3
B-Y/POS. 4
F.GND 5
To POWER BOARD --CN4
CN2
D.GND 1
SW5V 2
A5V 3
GND 4
+12V 5
NC 6
GND 7
-12V 8
NC 9
F.GND 10
DG
+5V
+12V
F.GND
L1 220
L2 101
L4 101
-12V
C83 47/25KA
C84 47/25KA
C85 100/16KS
D100 POWER LED
R107 272
C81 104
C82 100/16KA
D5V ①
To SWITCH BOARD(
VR8 MIX/WIPE CONTROL
WIPE
VR8 100K
CN5 (2/2)
UPPER 14
LOWER 15
A.FADE 16
A.BMIX 17
A.AMIX 18
R33 102
R32 102
R31 102
To MAIN BOARD (3/3) ---CN5
VR1 SOURCE 1 AUDIO FADER
R1 101
Q1
C100 47/35KS
R2 203
C1 220
R3 302
C5 22/10KA
C101 47/35KS
SOURCE-1
UPPER
LOWER
VR1 50K
C9 4.7/25KN
C13 47/25KA
C14 47/25KA
R13 473
C19 10/10KN
IC1
C15 22/10KA
C10 4.7/25KN
R14 473
CN1 (1/2)
SOURCE1L 1
GND 2
SOURCE1R 3
GND 4
SOURCE2L 5
GND 6
SOURCE2R 7
GND 8
AUX L 9
GND 10
AUX R 11
GND 12
To REAR BOARD --CN2
R4 101
Q2
C102 47/35KS
R5 203
C2 220
R6 302
C6 22/10KA
C103 47/35KS
R7 101
Q3
C104 47/35KS
R8 203
C3 220
R9 302
C7 22/10KA
C105 47/35KS
SOURCE-2
C11 4.7/25KN
C16 47/25KA
C17 47/25KA
R15 473
C20 10/10KN
C21 10/10KN
R17 223
R18 223
R19 223
R27 223
C35 101
C36 101
R28 333
IC4 (1/2)
C39 104
R90 0
C92 47/35KS
C43 4.7/25KN
C45 47/25KA
C46 47/25KA
IC2
C18 22/10KA
C12 4.7/25KN
R16 473
C22 10/10KN
R20 223
R25 273
R10 101
Q4
C106 47/35KS
R11 203
C4 220
R12 302
C8 22/10KA
C107 47/35KS
VR2 50K
VR2 SOURCE 2 AUDIO FADER
C23 22/10KN
C24 22/10KN
AUX
VR3 AUXILIARY AUDIO FADER
VR3 50K
C38 101
R30 333
R29 223
C37 101
IC4 (2/2)
R91 0
C93 47/35KS
C40 104
R26 273
C41 22/10KN
C42 22/10KN
C44 4.7/25KN
C47 22/10KA
IC5
CN8
MIC 1
MIC GND 2
To JACK BOARD --CN2
C25 1/50KN
R21 332
C26 101
C28 101
R22 333
IC3 (2/2)
C27 104
C29 1/50KN
R23 102
C30 101
C32 270
R24 223
IC3 (1/2)
C31 104
C33 10/25KN
MIC
VR4 MIC AUDIO FADER
VR4 50K
C56 10/10KN
C57 10/10KN
A
B
C
D
1
2
3
4

ITCH BOARD (1/2)


D5V ①
To SWITCH BOARD(2/2) ------ ①
VR8 MIX/WIPE CONTROL
VR9 KEY LEVEL CONTROL
WIPE
SP.KEY LEVEL
UPPER
LOWER
VR10 VR11 VR12
CHROMA
EXT.KEY
TIME
VR8 100K
VR9 100K
VR10~VR12:100K
VR10 CHROMA LEVEL CONTROL
VR11 KEY LEVEL CONTROL
VR12 TIME CONTROL
CN7 (2/2)
7 B-Y/POS.
8 R-Y/POS.
9 WIPE
10 KEYLEVEL
11 CHROMA
12 EXT.KEY
13 SPEED
To MAIN BOARD (3/3) --- CN9
C77 330/6.3KS
C78 330/6.3KS
C79 330/6.3KS
C80 330/6.3KS
L3 220
CN4
1 GND
2 D5V
4 LEVEL L
3 LEVEL R
To LEVEL METER
R75 0
C75 0.47/50KA
VR6 3K3
VR6 AUDIO Lch
R76 0
VR7 3K3
C76 0.47/50KA
VR7 AUDIO Rch
C36 101
R28 333
+12V
C35 101
IC4 (1/2)
C39 104
R90 0
C92 47/35KS
C43 4.7/25KN
C45 47/25KA
C46 47/25KA
R34 473
IC5
C48 10/10KN
R36 153
C50 101
C51 330
R37 473
+12V
R92 0
IC6 (1/2)
C54 104
C94 47/35KS
Q6 Q20
R40 103
R70 103
R41 103
C71 R54 10/16KA 102
R55 152
C72 R56 10/16KA 102
R57 152
C73 R58 10/16KA 102
R59 152
C74 R60 10/16KA 102
R61 152
R71 103
Q7 Q21
CN1 (2/2)
13 GND
14 REC.1L
15 GND
16 REC.1R
17 GND
18 REC.2L
19 GND
20 REC.2R
To REAR BOARD --CN2
C38 101
R30 333
C37 101
IC4 (2/2)
R91 0
C47 22/10KA
C44 4.7/25KN
R35 473
-12V
C93 47/35KS
C40 104
R26 273
-12V
C53 330
R39 473
C49 10/10KN
R38 153
R93 0
C52 101
IC6 (2/2)
C55 104
+12V
R52 104
D1 D2
Q5
R53 103
C70 10/50KS
-12V
C69 100/25KS
C95 47/35KS
-12V
C41 22/10KN
C42 22/10KN
MIC
VR4 MIC AUDIO FADER
C59 820
R44 104
L5 220
C65 102
+12V
C56 R42 10/10KN 433
C58 101
IC7 (1/2)
C63 104
C90 47/35KS
R45 101
R46 103
C67 47/10KN
Q8 Q22
R50 103
R72 103
C62 820
R47 104
C57 R43 10/10KN 433
C61 101
IC7 (2/2)
R48 101
C66 102
L6 220
C64 104
C91 47/35KS
R49 103
-12V
R51 103
R73 103
Q9 Q23
C68 47/10KN
CN3
13 NC
12 NC
11 NC
10 GND
9 VR OUT R
8 VR OUT L
7 GND
6 VR IN R
5 VR IN L
4 PHONE L
3 GND
2 PHONE R
1 GND
To MAIN BOARD (1/3) ---CN8
4
5
6
7

〈Index〉

SWITCH BOARD(1/2)

IC1	D3	Q6	C6
IC2	C3	Q7	B6
IC3	A3	Q8	A6
IC4	C4,B4	Q9	A6
IC5	C5	Q20	C6
IC6	B5,C6	Q21	B6
IC7	A5	Q22	A6
Q1	D2	Q23	A6
Q2	C2	D1	B5
Q3	C2	D2	B5
Q4	B2	D100	E3
Q5	B5		

〈Voltages〉

SWITCH BOARD

	IC1	IC2	IC3	IC4	IC5	IC6	IC7
Pin 1	11.7	11.7	0	0	11.7	0	0
2	4.9	0	0	0	4.9	0	0
3	0	0	0	0	0	0	0
4	-11.7	-11.7	-11.7	-11.7	-11.7	-11.7	-11.7
5	-11.7	-11.7	0	0	-11.7	0	0
6	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0
8	0	0	11.7	11.7	0	11.7	11.7
9	0	0			0		
10	0	0			0		
11	0	0			0		
12	-11.7	-11.7			-11.7		
13	-11.7	-11.7			-11.7		
14	0	0			0		
15	4.9	0			4.9		
16	11.7	11.7			11.7		

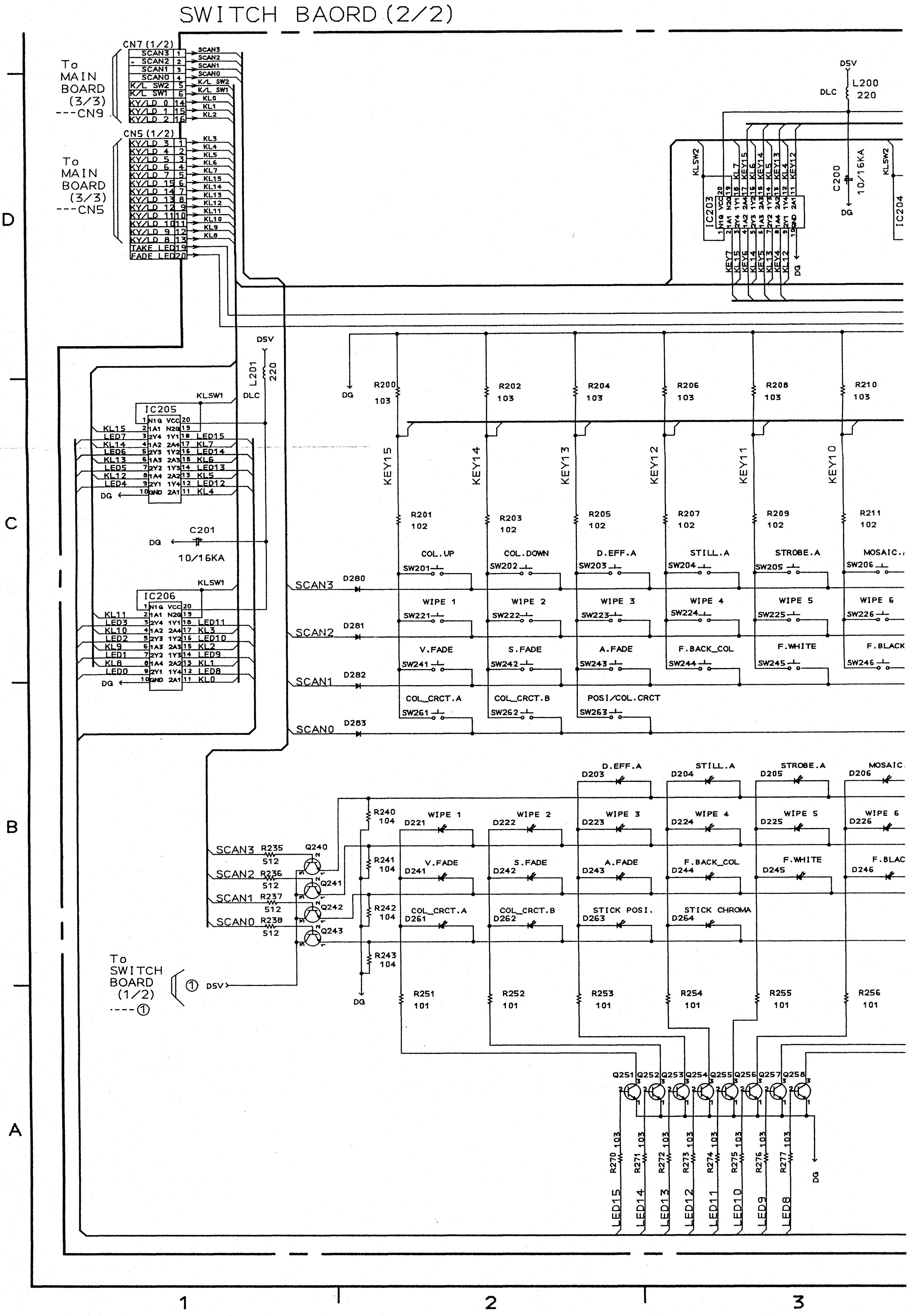
	B	C	E		B	C	E
Q1	-0.4	11.7	-1.0	Q8	-0.2	0	0
2	-0.4	11.7	-1.0	9	-0.2	0	0
3	-0.4	11.7	-1.0	20	-0.2	0	0
4	-0.4	11.7	-1.0	21	-0.2	0	0
5	11.5	-0.2	11.4	22	-0.2	0	0
6	-0.2	0	0	23	-0.2	0	0
7	-0.2	0	0				

SCHEMATIC DIAGRAM OF

<Index>

SWITCH
BOARD
(2/2)

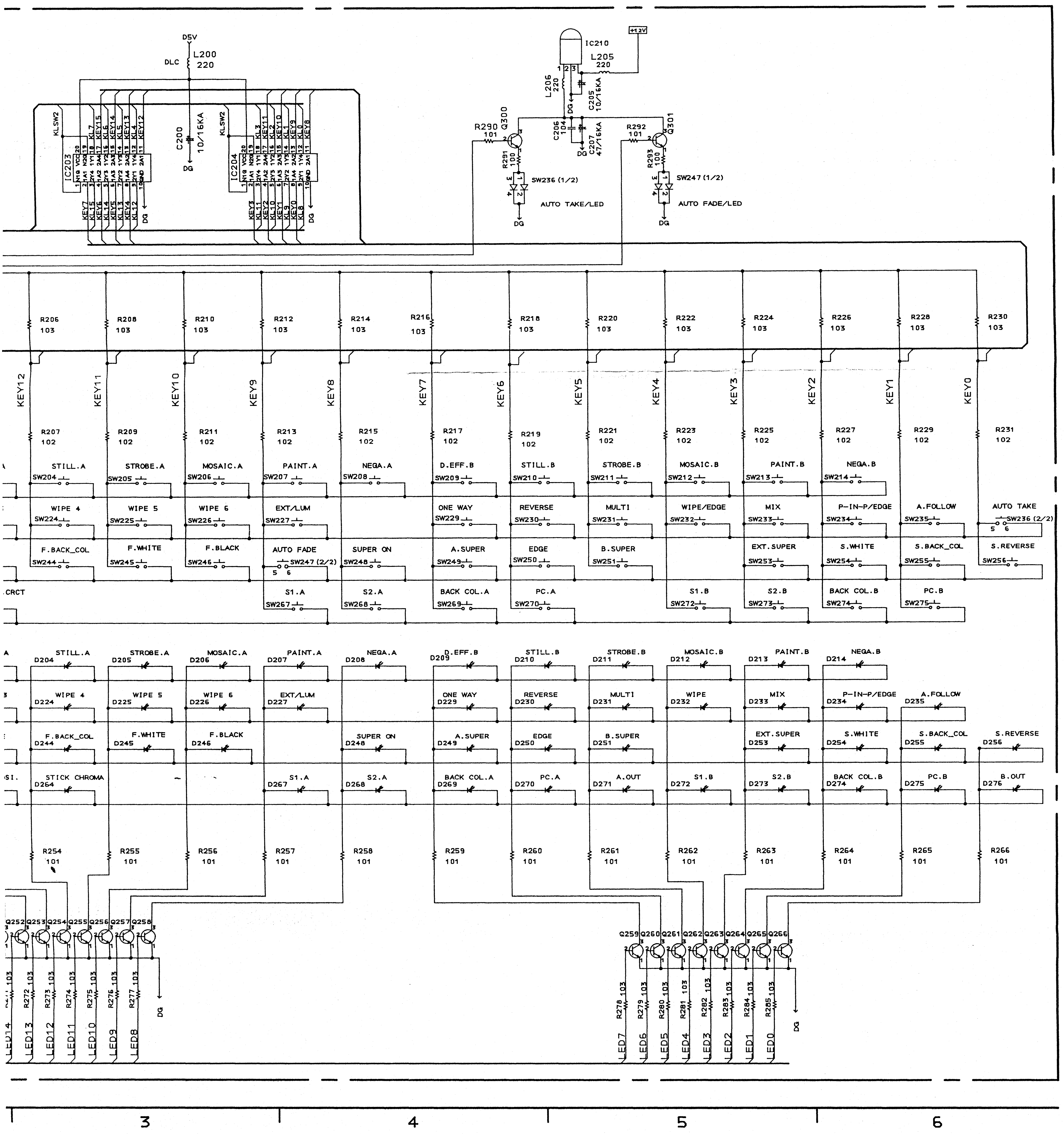
IC203	D3	D225	B3
IC204	D3	D226	B3
IC205	C1	D227	B4
IC206	C1	D229	B4
IC210	D5	D230	B4
Q240	B1	D231	B5
Q241	B1	D232	B5
Q242	B1	D233	B5
Q243	B1	D234	B6
Q251	A2	D235	B6
Q252	A3	D241	B2
Q253	A3	D242	B2
Q254	A3	D243	B2
Q255	A3	D244	B3
Q256	A3	D245	B3
Q257	A3	D246	B3
Q258	A3	D248	B4
Q259	A5	D249	B4
Q260	A5	D250	B4
Q261	A5	D251	B5
Q262	A5	D253	B5
Q263	A5	D254	B6
Q264	A5	D255	B6
Q265	A5	D256	B6
Q266	A5	D261	B2
Q300	D4	D262	B2
Q301	D5	D263	B2
D203	B2	D264	B3
D204	B3	D267	B4
D205	B3	D268	B4
D206	B3	D269	B4
D207	B4	D270	B4
D208	B4	D271	B5
D209	B4	D272	B5
D210	B4	D273	B5
D211	B5	D274	B6
D212	B5	D275	B6
D213	B5	D276	B6
D214	B6	D280	C2
D221	B2	D281	C2
D222	B2	D282	B2
D223	B2	D283	B2
D224	B3		


SWITCH BAORD (2/2)
To MAIN BOARD (3/3) ---CN9
To MAIN BOARD (3/3) ---CN5
CN7 (1/2)
SCAN3
SCAN2
SCAN1
SCAN0
K/L SW2
K/L SW1
KY/LD 0
KY/LD 1
KY/LD 2
CN5 (1/2)
KY/LD 3
KY/LD 4
KY/LD 5
KY/LD 6
KY/LD 7
KY/LD 15
KY/LD 14
KY/LD 13
KY/LD 12
KY/LD 11
KY/LD 10
KY/LD 9
KY/LD 8
TAKE LED
FADE LED
IC203
IC204
IC205
IC206
L200 220
L201 220
C200 10/16KA
C201 10/16KA
D5V
DLC
DG
KLSW1
KLSW2
KEY15
KEY14
KEY13
KEY12
KEY11
KEY10
R200 103
R202 103
R204 103
R206 103
R208 103
R210 103
R201 102
R203 102
R205 102
R207 102
R209 102
R211 102
COL.UP SW201
COL.DOWN SW202
D.EFF.A SW203
STILL.A SW204
STROBE.A SW205
MOSAIC.A SW206
WIPE 1 SW221
WIPE 2 SW222
WIPE 3 SW223
WIPE 4 SW224
WIPE 5 SW225
WIPE 6 SW226
V.FADE SW241
S.FADE SW242
A.FADE SW243
F.BACK_COL SW244
F.WHITE SW245
F.BLACK SW246
COL_CRCT.A SW261
COL_CRCT.B SW262
POSI/COL.CRCT SW263
SCAN3 D280
SCAN2 D281
SCAN1 D282
SCAN0 D283
D.EFF.A D203
STILL.A D204
STROBE.A D205
MOSAIC D206
WIPE 1 D221
WIPE 2 D222
WIPE 3 D223
WIPE 4 D224
WIPE 5 D225
WIPE 6 D226
V.FADE D241
S.FADE D242
A.FADE D243
F.BACK_COL D244
F.WHITE D245
F.BLAC D246
COL_CRCT.A D261
COL_CRCT.B D262
STICK POSI. D263
STICK CHROMA D264
R235 512
R236 512
R237 512
R238 512
Q240
Q241
Q242
Q243
R240 104
R241 104
R242 104
R243 104
To SWITCH BOARD (1/2) ----①
① D5V
R251 101
R252 101
R253 101
R254 101
R255 101
R256 101
Q251 Q252 Q253 Q254 Q255 Q256 Q257 Q258
R270 103
R271 103
R272 103
R273 103
R274 103
R275 103
R276 103
R277 103
LED15
LED14
LED13
LED12
LED11
LED10
LED9
LED8
D
C
B
A
1
2
3

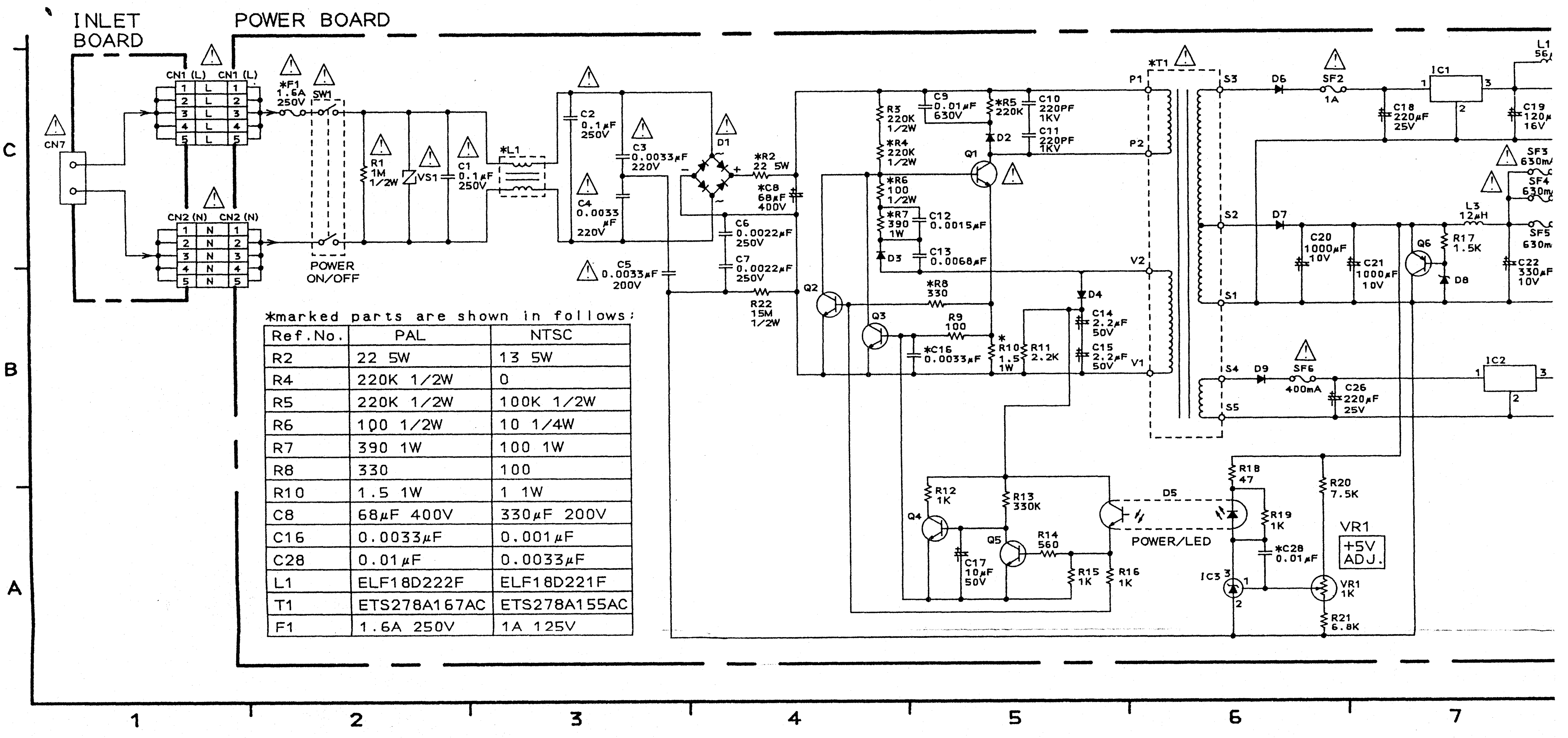
	IC203	IC204	IC205	IC206	IC210
Pin 1	5.0	5.0	0	0	4.9
2	0	0	1.2	0	0
3	1.2	0	2.4	1.3	11.6
4	0	0	0	1.2	
5	0	1.2	0	0	
6	0	0	1.3	1.3	
7	1.3	1.3	1.3	2.4	
8	0	0	0	0	
9	0	0	1.2	0	
10	0	0	0	0	
11	0	0	1.2	0	
12	1.2	0	0	0	
13	0	0	1.3	2.4	
14	1.3	2.4	1.3	1.3	
15	0	0	0	0	
16	0	0	0	1.2	
17	0	0	2.4	1.3	
18	2.4	1.3	1.2	0	
19	5.0	5.0	0	0	
20	5.1	5.1	5.1	5.1	

	B	C	E		B	C	E
Q240	1.3	5.1	1.2	Q258	0	1.9	0
241	0.9	5.1	0.8	259	0.4	1.3	0
242	0.9	5.1	0.8	260	0	2.2	0
243	1.0	5.1	0.8	261	0.2	1.7	0
251	0.2	1.3	0	262	0.2	1.4	0
252	0	1.5	0	263	0.2	1.7	0
253	0.2	1.7	0	264	0	2.2	0
254	0	2.3	0	265	0.3	0.6	0
255	0	1.8	0	266	0	0.9	0
256	0.2	1.3	0	300	0	4.9	0.2
257	0.2	1.4	0	301	0	4.9	0.2

MATIC DIAGRAM OF SWITCH BOARD (2/2)


D5V
DLC
L200 220
C200 10/16KA
DG
IC203
IC204
KLSW2
IC210
+12V
L205 220
L206 220
C205 10/16KA
C206 104
C207 47/16KA
R290 101
Q300
R291 100
R292 101
Q301
R293 100
SW236 (1/2)
AUTO TAKE/LED
SW247 (1/2)
AUTO FADE/LED
R206 103
R208 103
R210 103
R212 103
R214 103
R216 103
R218 103
R220 103
R222 103
R224 103
R226 103
R228 103
R230 103
KEY12
KEY11
KEY10
KEY9
KEY8
KEY7
KEY6
KEY5
KEY4
KEY3
KEY2
KEY1
KEY0
R207 102
R209 102
R211 102
R213 102
R215 102
R217 102
R219 102
R221 102
R223 102
R225 102
R227 102
R229 102
R231 102
STILL.A SW204
STROBE.A SW205
MOSAIC.A SW206
PAINT.A SW207
NEGA.A SW208
D.EFF.B SW209
STILL.B SW210
STROBE.B SW211
MOSAIC.B SW212
PAINT.B SW213
NEGA.B SW214
WIPE 4 SW224
WIPE 5 SW225
WIPE 6 SW226
EXT/LUM SW227
ONE WAY SW229
REVERSE SW230
MULTI SW231
WIPE/EDGE SW232
MIX SW233
P-IN-P/EDGE SW234
A.FOLLOW SW235
AUTO TAKE SW236 (2/2)
F.BACK_COL SW244
F.WHITE SW245
F.BLACK SW246
AUTO FADE SW247 (2/2)
SUPER ON SW248
A.SUPER SW249
EDGE SW250
B.SUPER SW251
EXT.SUPER SW253
S.WHITE SW254
S.BACK_COL SW255
S.REVERSE SW256
CRCT
S1.A SW267
S2.A SW268
BACK COL.A SW269
PC.A SW270
S1.B SW272
S2.B SW273
BACK COL.B SW274
PC.B SW275
STILL.A D204
STROBE.A D205
MOSAIC.A D206
PAINT.A D207
NEGA.A D208
D.EFF.B D209
STILL.B D210
STROBE.B D211
MOSAIC.B D212
PAINT.B D213
NEGA.B D214
WIPE 4 D224
WIPE 5 D225
WIPE 6 D226
EXT/LUM D227
ONE WAY D229
REVERSE D230
MULTI D231
WIPE D232
MIX D233
P-IN-P/EDGE D234
A.FOLLOW D235
F.BACK_COL D244
F.WHITE D245
F.BLACK D246
SUPER ON D248
A.SUPER D249
EDGE D250
B.SUPER D251
EXT.SUPER D253
S.WHITE D254
S.BACK_COL D255
S.REVERSE D256
STICK CHROMA D264
S1.A D267
S2.A D268
BACK COL.A D269
PC.A D270
A.OUT D271
S1.B D272
S2.B D273
BACK COL.B D274
PC.B D275
B.OUT D276
R254 101
R255 101
R256 101
R257 101
R258 101
R259 101
R260 101
R261 101
R262 101
R263 101
R264 101
R265 101
R266 101
Q252 Q253 Q254 Q255 Q256 Q257 Q258
Q259 Q260 Q261 Q262 Q263 Q264 Q265 Q266
R272 103
R273 103
R274 103
R275 103
R276 103
R277 103
R278 103
R279 103
R280 103
R281 103
R282 103
R283 103
R284 103
R285 103
LED14 LED13 LED12 LED11 LED10 LED9 LED8
LED7 LED6 LED5 LED4 LED3 LED2 LED1 LED0
3
4
5
6

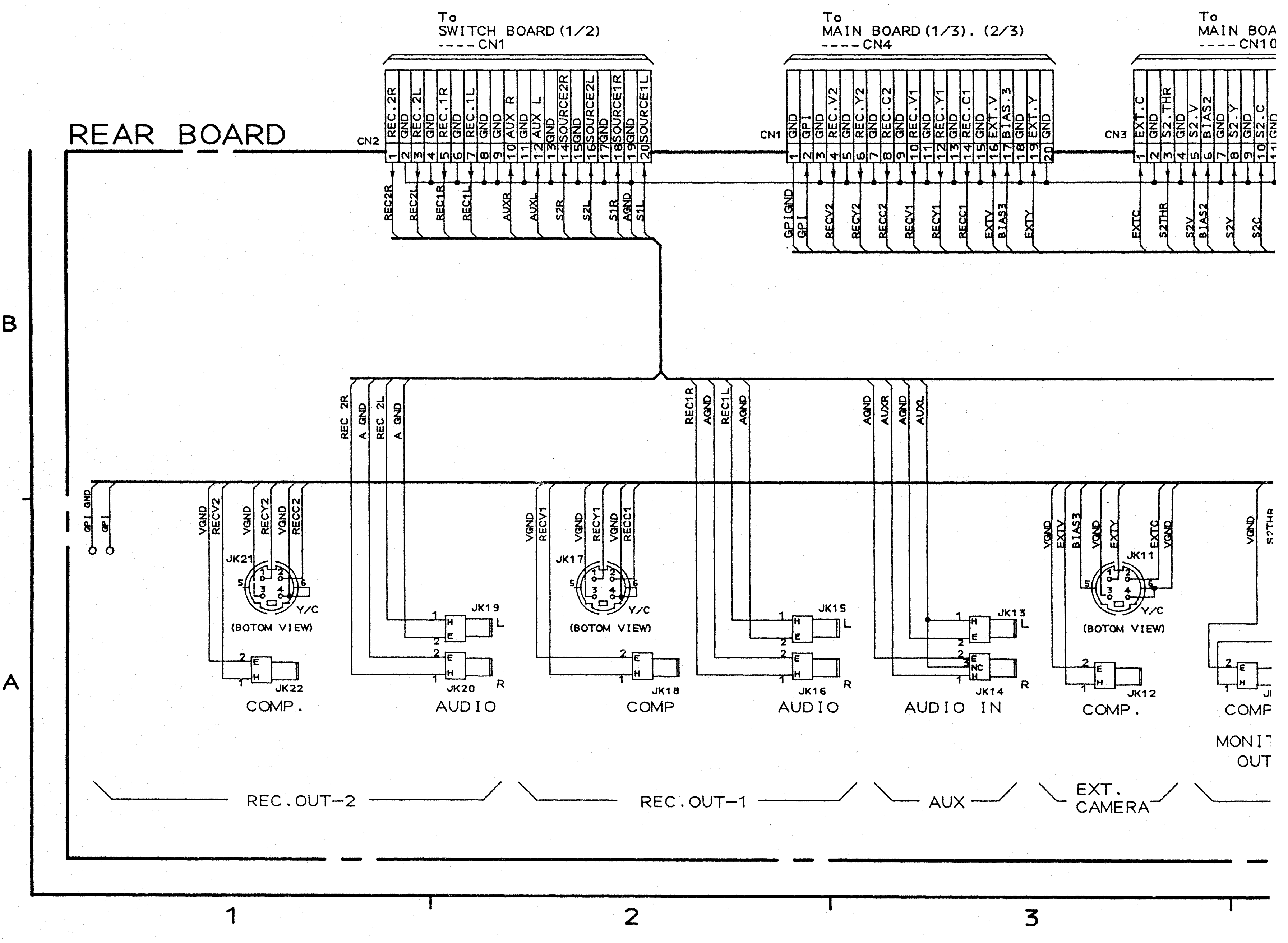
SCHEMATIC DIAGRAM OF POWER BOARD


INLET BOARD
POWER BOARD
CN7
CN1 (L)
CN2 (N)
*F1 1.6A 250V
SW1
POWER ON/OFF
R1 1M 1/2W
VS1
C1 0.1μF 250V
*L1
C2 0.1μF 250V
C3 0.0033μF 220V
C4 0.0033μF 220V
C5 0.0033μF 200V
D1
*R2 22 5W
*C8 68μF 400V
C6 0.0022μF 250V
C7 0.0022μF 250V
R22 15M 1/2W
R3 220K 1/2W
C9 0.01μF 630V
*R5 220K
C10 220PF 1KV
C11 220PF 1KV
*R4 220K 1/2W
D2
Q1
*R6 100 1/2W
*R7 390 1W
C12 0.0015μF
D3
C13 0.0068μF
*R8 330
R9 100
*C16 0.0033μF
*R10 1.5 1W
R11 2.2K
D4
C14 2.2μF 50V
C15 2.2μF 50V
Q2
Q3
*T1
P1
P2
V2
V1
S1
S2
S3
S4
S5
D6
SF2 1A
IC1
C18 220μF 25V
C19 120μF 16V
SF3 630mA
SF4 630mA
L1 56μH
L3 12μH
SF5 630mA
D7
C20 1000μF 10V
C21 1000μF 10V
Q6
R17 1.5K
D8
C22 330μF 10V
D9
SF6 400mA
C26 220μF 25V
IC2
R12 1K
R13 330K
Q4
Q5
R14 560
C17 10μF 50V
R15 1K
R16 1K
D5
POWER/LED
R18 47
R19 1K
R20 7.5K
*C28 0.01μF
IC3
VR1 1K
VR1 +5V ADJ.
R21 6.8K
C
B
A
1
2
3
4
5
6
7

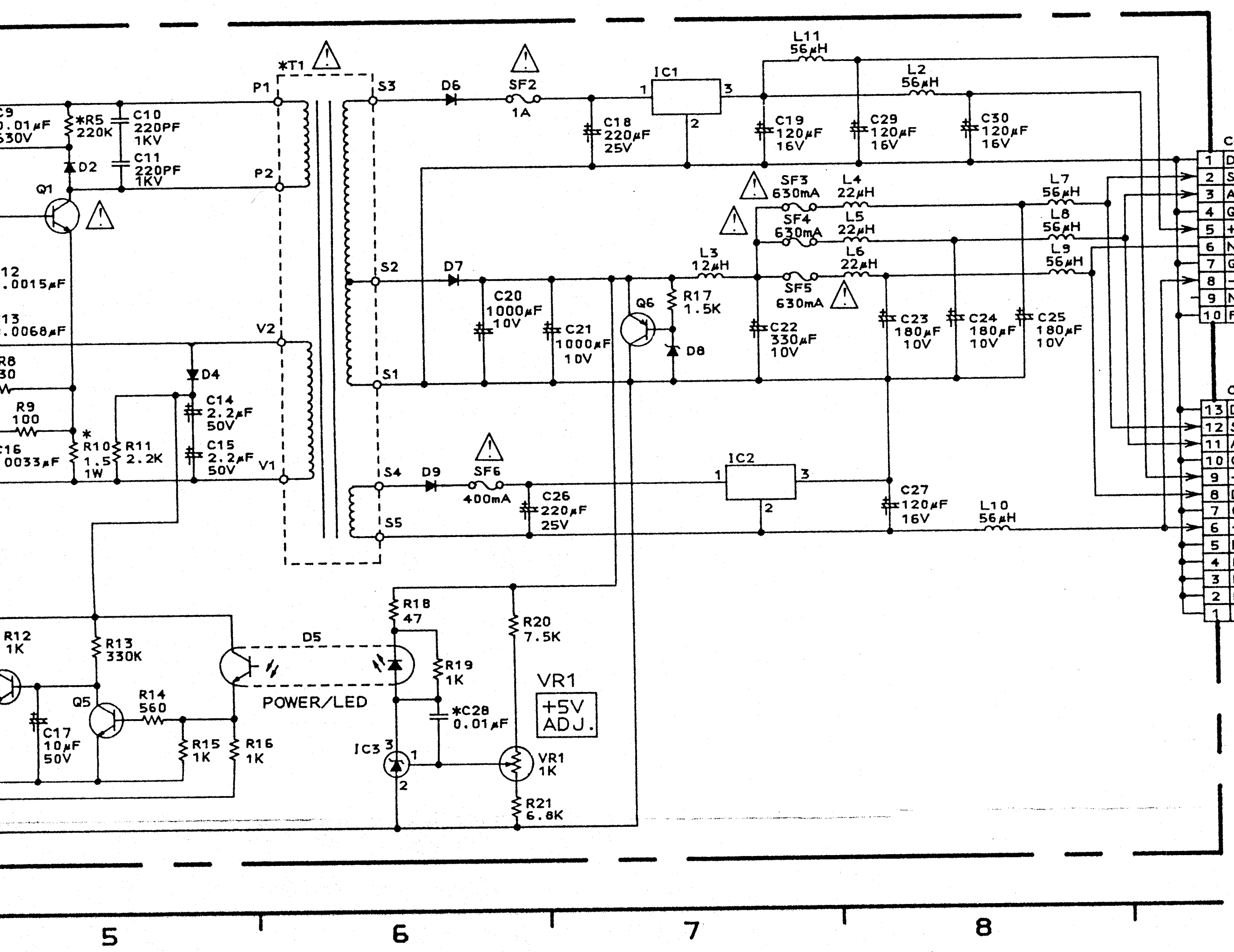
*marked parts are shown in follows;

Ref.No.	PAL	NTSC
R2	22 5W	13 5W
R4	220K 1/2W	0
R5	220K 1/2W	100K 1/2W
R6	100 1/2W	10 1/4W
R7	390 1W	100 1W
R8	330	100
R10	1.5 1W	1 1W
C8	68μF 400V	330μF 200V
C16	0.0033μF	0.001μF
C28	0.01μF	0.0033μF
L1	ELF18D222F	ELF18D221F
T1	ETS278A167AC	ETS278A155AC
F1	1.6A 250V	1A 125V

SCHEMATIC DIAGRAM OF REAR BOAI


To SWITCH BOARD (1/2) ----CN1
To MAIN BOARD (1/3), (2/3) ----CN4
To MAIN BOA ----CN10
REAR BOARD
CN2
CN1
CN3
REC.2R
GND
REC.2L
REC.1R
REC.1L
AUX R
AUX L
SOURCE2R
SOURCE2L
SOURCE1R
SOURCE1L
GP1
REC.V2
REC.Y2
REC.C2
REC.V1
REC.Y1
REC.C1
EXT.V
BIAS.3
EXT.Y
EXT.C
S2.THR
S2.V
BIAS2
S2.Y
S2.C
JK21
JK22
JK19
JK20
JK17
JK18
JK15
JK16
JK13
JK14
JK11
JK12
Y/C
(BOTOM VIEW)
L
R
COMP.
AUDIO
COMP
AUDIO
AUDIO IN
COMP.
COMP
MONIT OUT
REC.OUT-2
REC.OUT-1
AUX
EXT. CAMERA
B
A
1
2
3

ARD


To
SWITCH
BOARD
(1/2)
---CN2
CN4
1 D.GND
2 SW 5V
3 A 5V
4 GND
5 +12V
6 NC
7 GND
8 -12V
9 NC
10 F.GND
CN3
13 D.GND
12 SW 5V
11 A 5V
10 GND
9 +12V
8 D 5V
7 GND
6 -12V
5 NC
4 F.GND
3 F.GND
2 F.GND
1 F.GND
To
MAIN
BOARD
(1/3)
---CN1
*T1
P1
P2
S1
S2
S3
S4
S5
V1
V2
D2
D4
D5
D6
D7
D8
D9
IC1
IC2
IC3
Q1
Q5
Q6
SF2 1A
SF3 630mA
SF4 630mA
SF5 630mA
SF6 400mA
L2 56μH
L3 12μH
L4 22μH
L5 22μH
L6 22μH
L7 56μH
L8 56μH
L9 56μH
L10 56μH
L11 56μH
C10 220PF 1KV
C11 220PF 1KV
C14 2.2μF 50V
C15 2.2μF 50V
C17 10μF 50V
C18 220μF 25V
C19 120μF 16V
C20 1000μF 10V
C21 1000μF 10V
C22 330μF 10V
C23 180μF 10V
C24 180μF 10V
C25 180μF 10V
C26 220μF 25V
C27 120μF 16V
*C28 0.01μF
C29 120μF 16V
C30 120μF 16V
*R5 220K
R9 100
*R10 1.5 1W
R11 2.2K
R12 1K
R13 330K
R14 560
R15 1K
R16 1K
R17 1.5K
R18 47
R19 1K
R20 7.5K
R21 6.8K
VR1 1K
VR1
+5V
ADJ.
POWER/LED
5
6
7
8

<Index>

POWER BOARD

IC1	C7
IC2	B7
IC3	A6
Q1	C5
Q2	B4
Q3	B4
Q4	A5
Q5	A5
Q6	C7
D1	C4
D2	C5
D3	C4
D4	B5
D5	A6
D6	C6
D7	C6
D8	B7
D9	B6

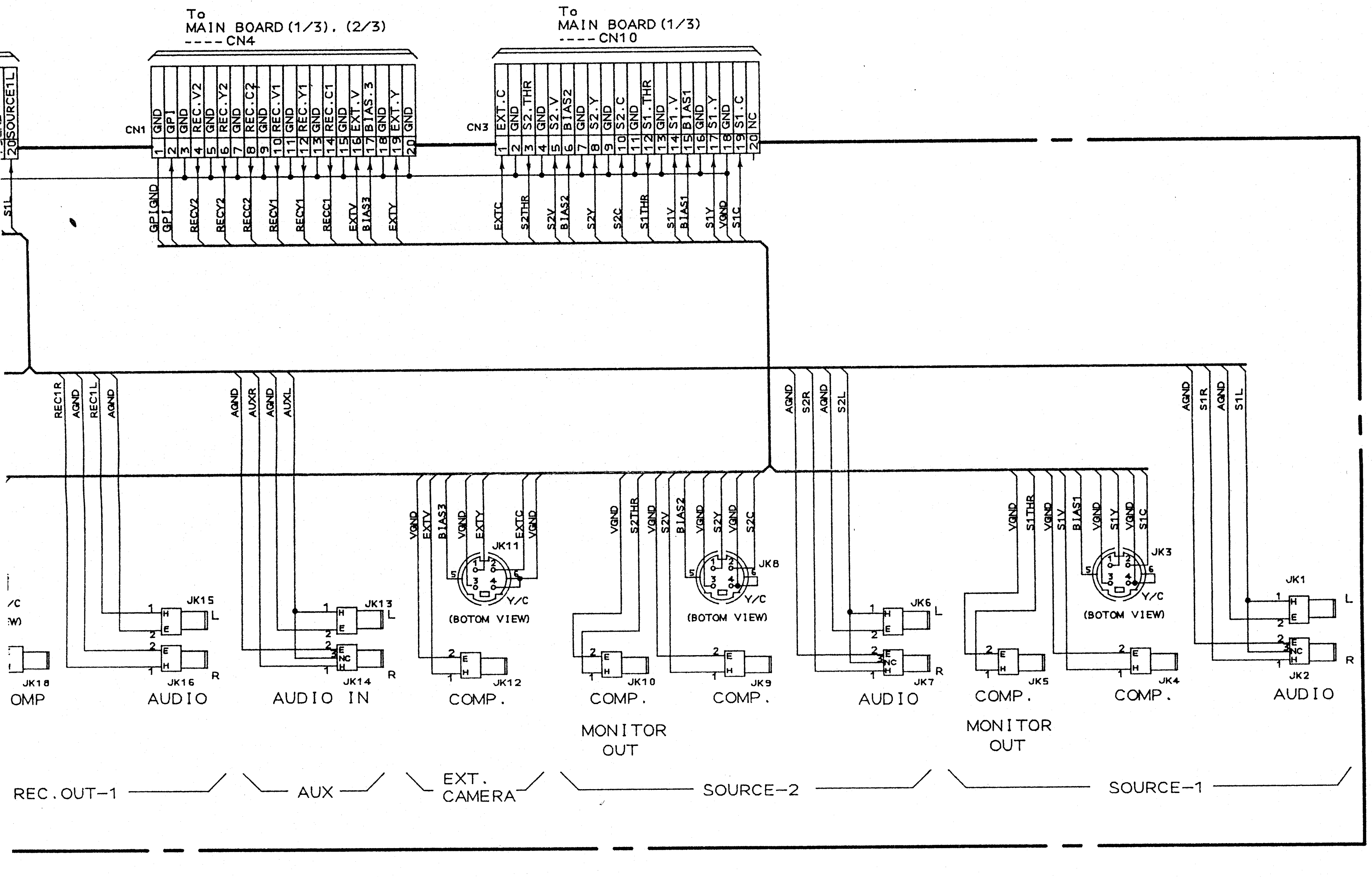
<Voltages>

POWER BOARD

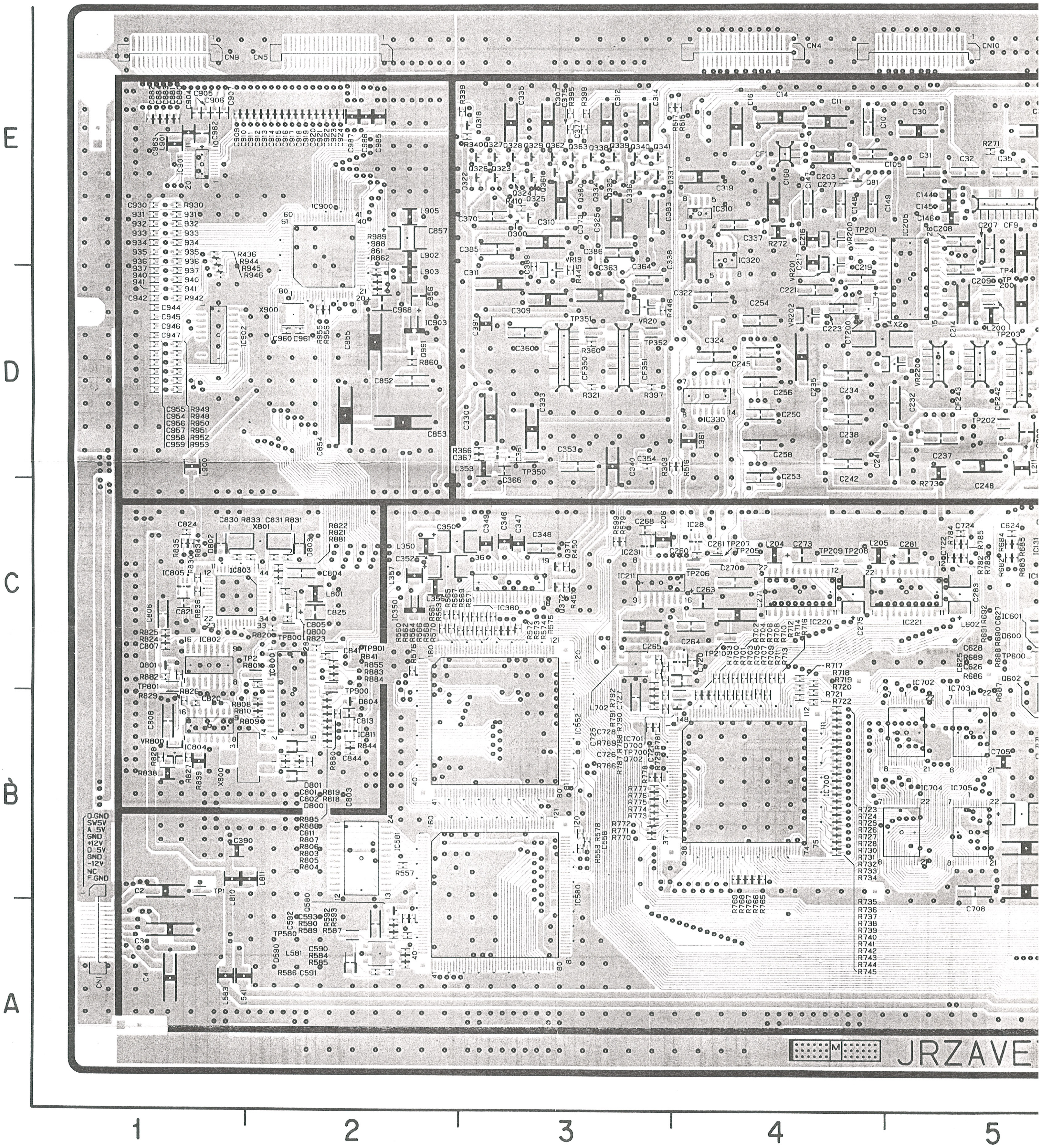
	IC1	IC2	IC3
Pin 1	13.6	3.1	2.5
2	0	-12.0	0
3	12.1	0	3.9

	B	C	E
Q1	-34.7	153.0	-34.8
2	-34.4	-34.6	-34.7
3	-34.6	-34.6	-34.7
4	-34.6	-28.6	-34.6
5	-34.1	-34.5	-34.6
6	5.0	0	5.2

SCHEMATIC DIAGRAM OF REAR BOARD


To
MAIN BOARD (1/3), (2/3)
----CN4
To
MAIN BOARD (1/3)
----CN10
CN1
1 GND
2 GPI
3 GND
4 REC.V2
5 GND
6 REC.Y2
7 GND
8 REC.C2
9 GND
10 REC.V1
11 GND
12 REC.Y1
13 GND
14 REC.C1
15 GND
16 EXT.V
17 BIAS.3
18 GND
19 EXT.Y
20 GND
CN3
1 EXT.C
2 GND
3 S2.THR
4 GND
5 S2.V
6 BIAS2
7 GND
8 S2.Y
9 GND
10 S2.C
11 GND
12 S1.THR
13 GND
14 S1.V
15 BIAS1
16 GND
17 S1.Y
18 GND
19 S1.C
20 NC
20 SOURCE1L
REC1R
AGND
REC1L
AGND
AUXR
AUXL
S2R
S2L
S1R
S1L
JK11
JK8
JK3
Y/C
(BOTOM VIEW)
JK1
JK2
JK4
JK5
JK6
JK7
JK9
JK10
JK12
JK13
JK14
JK15
JK16
JK18
L
R
OMP
AUDIO
AUDIO IN
COMP.
COMP.
MONITOR
OUT
COMP.
AUDIO
COMP.
MONITOR
OUT
COMP.
AUDIO
REC.OUT-1
AUX
EXT.
CAMERA
SOURCE-2
SOURCE-1
3
4
5

MAIN BOARD

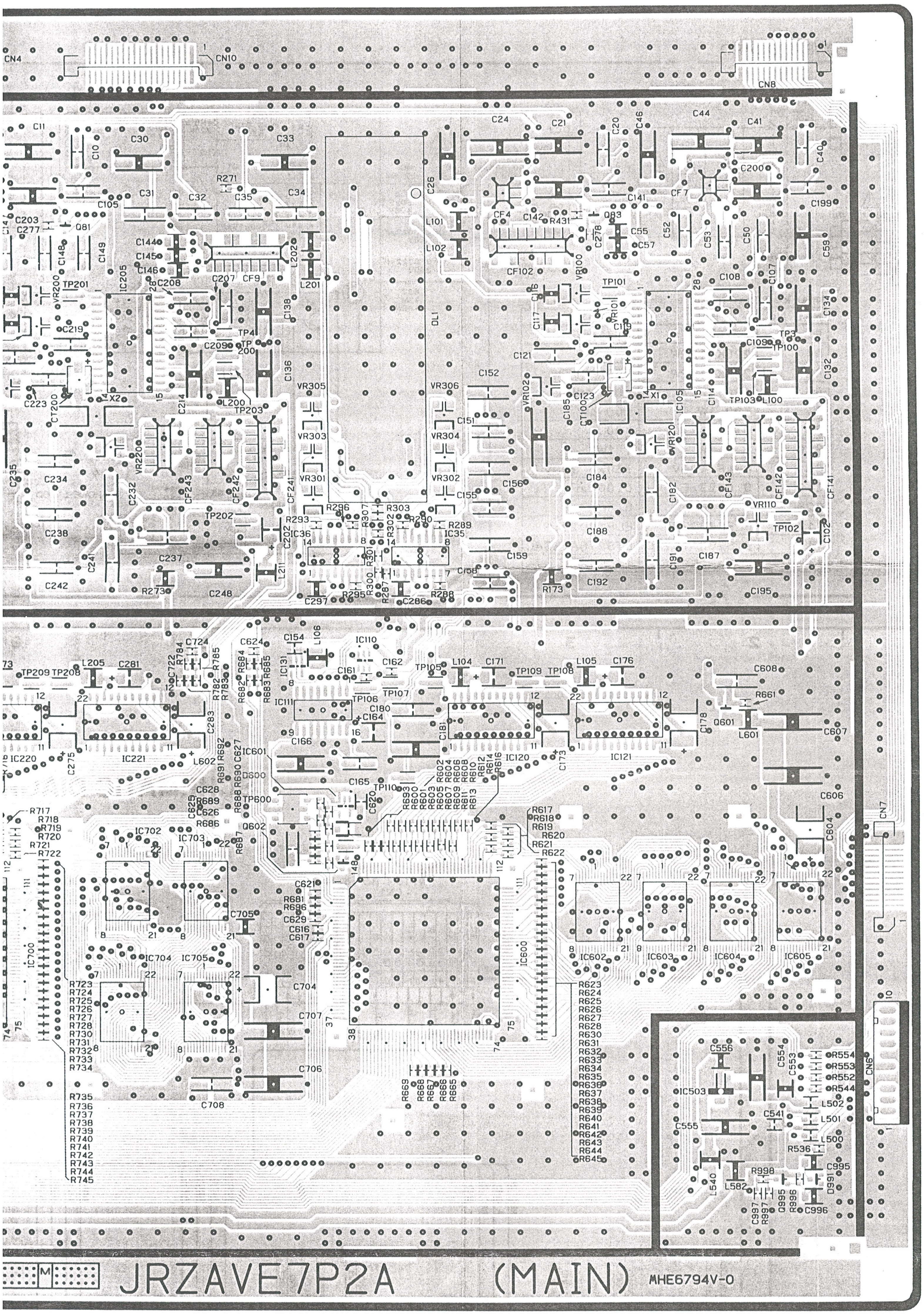

E
D
C
B
A
1
2
3
4
5
CN9
CN5
CN4
CN10
CN1
IC900
IC902
IC901
IC903
IC803
IC802
IC800
IC805
IC804
IC811
IC350
IC360
IC310
IC320
IC330
IC700
IC220
IC221
IC211
IC231
IC552
IC580
IC581
IC702
IC703
IC704
IC705
IC601
IC205
X900
X801
X800
D.GND
SW5V
A 5V
GND
+12V
D 5V
GND
-12V
NC
F.GND
JRZAVE

⟨Index⟩

MAIN BOARD (COMPONENT SIDE)

IC28	C4
IC35	D6
IC36	D5
IC105	D7
IC110	C5
IC111	C5
IC120	C6
IC121	C6
IC131	C5
IC205	E5
IC211	C3
IC220	C4
IC221	C5
IC231	C3
IC310	E4
IC320	E4
IC330	D4
IC350	C2
IC360	C3
IC361	D3
IC503	B7
IC552	B3
IC580	B3
IC581	B2
IC600	B6
IC601	C5
IC602	B6
IC603	B7
IC604	B7
IC605	B7
IC700	B4
IC701	B3
IC702	B5
IC703	B5
IC704	B5
IC705	B5
IC800	B2
IC802	C1
IC803	C1
IC804	B1
IC805	C1
IC811	B2
IC900	E2
IC901	E1
IC902	D1
IC903	D2
Q81	E4
Q83	E6
Q318	E3
Q322	E3
Q323	E3
Q324	E3
Q325	E3
Q326	E3
Q327	E3
Q328	E3
Q329	E3
Q334	E3
Q335	E3
Q336	E3
Q337	E3
Q338	E3
Q339	E3
Q340	E3
Q341	E3
Q360	E3
Q361	E3
Q362	E3
Q363	E3
Q371	C3
Q372	C3
Q580	A2
Q601	C7
Q602	C5
Q702	B4
Q800	C2
Q801	C1
Q991	D2
Q995	A7
D300	E3
D590	A2
D600	C5
D700	B3
D800	B2
D801	B2
D802	C1
D803	C2
D804	B2
D991	A7

R VIEW OF MAIN BOARD (COMPONENT SIDE)

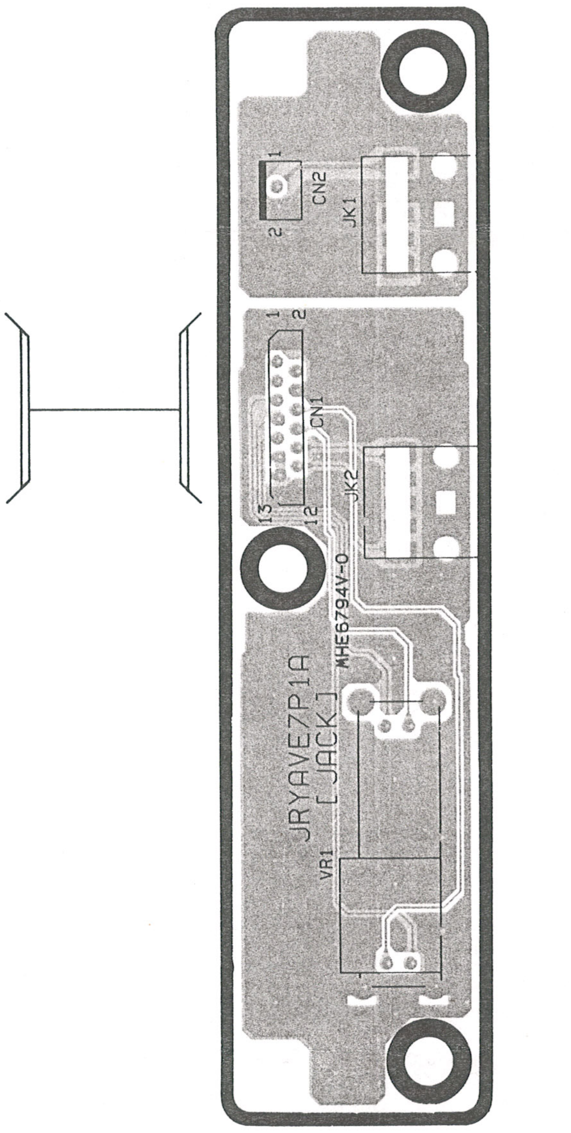

CN4
CN10
CN8
CN7
CN6
DL1
IC600
IC700
IC702
IC703
IC704
IC705
IC602
IC603
IC604
IC605
IC503
IC220
IC221
IC120
IC121
IC110
IC111
IC35
IC36
IC105
IC205
IC601
JRZAVE7P2A (MAIN)
MHE6794V-0

(COMPONENT SIDE)

▨ COMPONENT SIDE

PATTERN SIDE

JACK BOARD

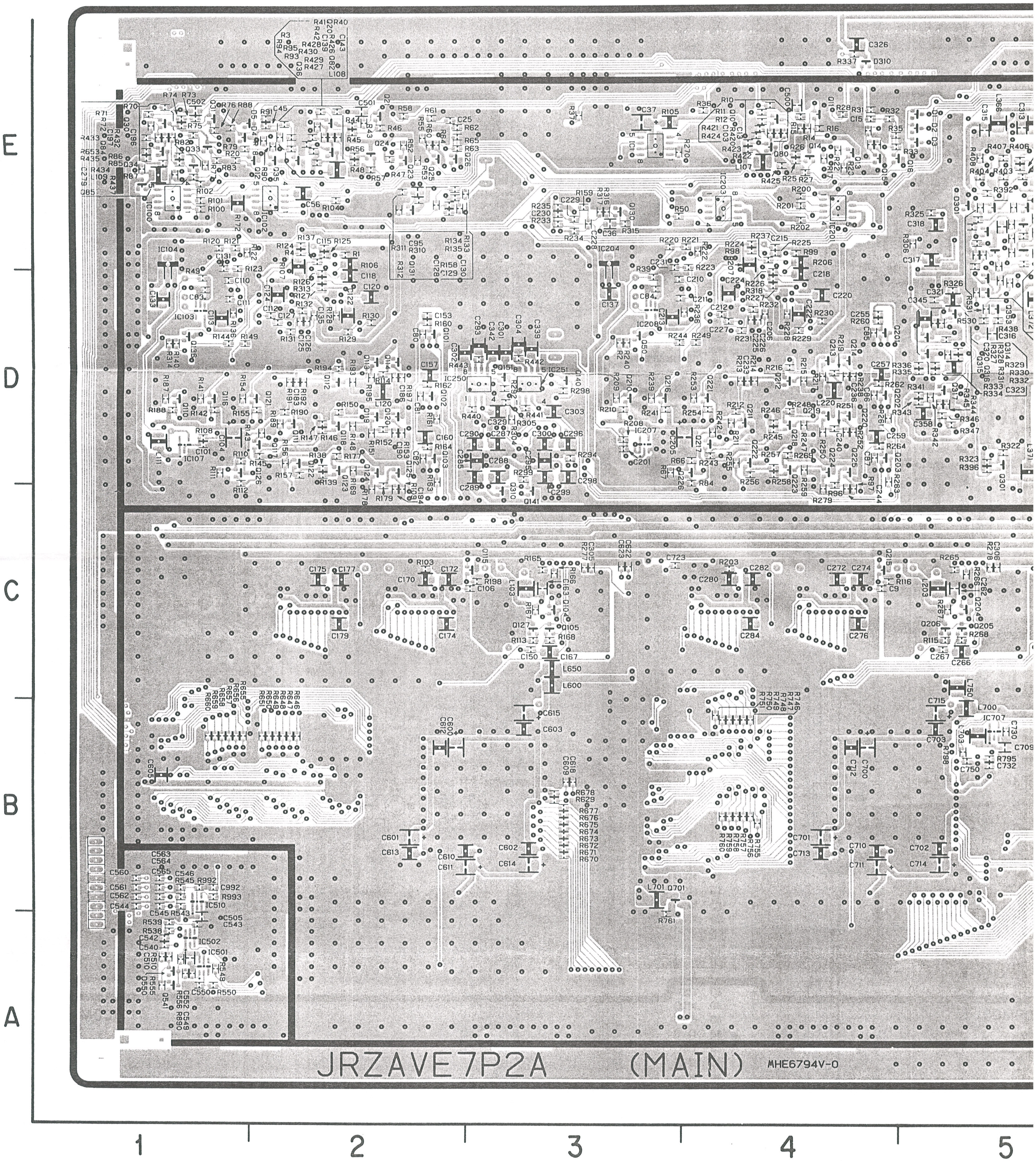

CN2
JK1
CN1
JK2
VR1
JRYAVE7P1A
[JACK]
MHE6794V-0

(COMPONENT SIDE)

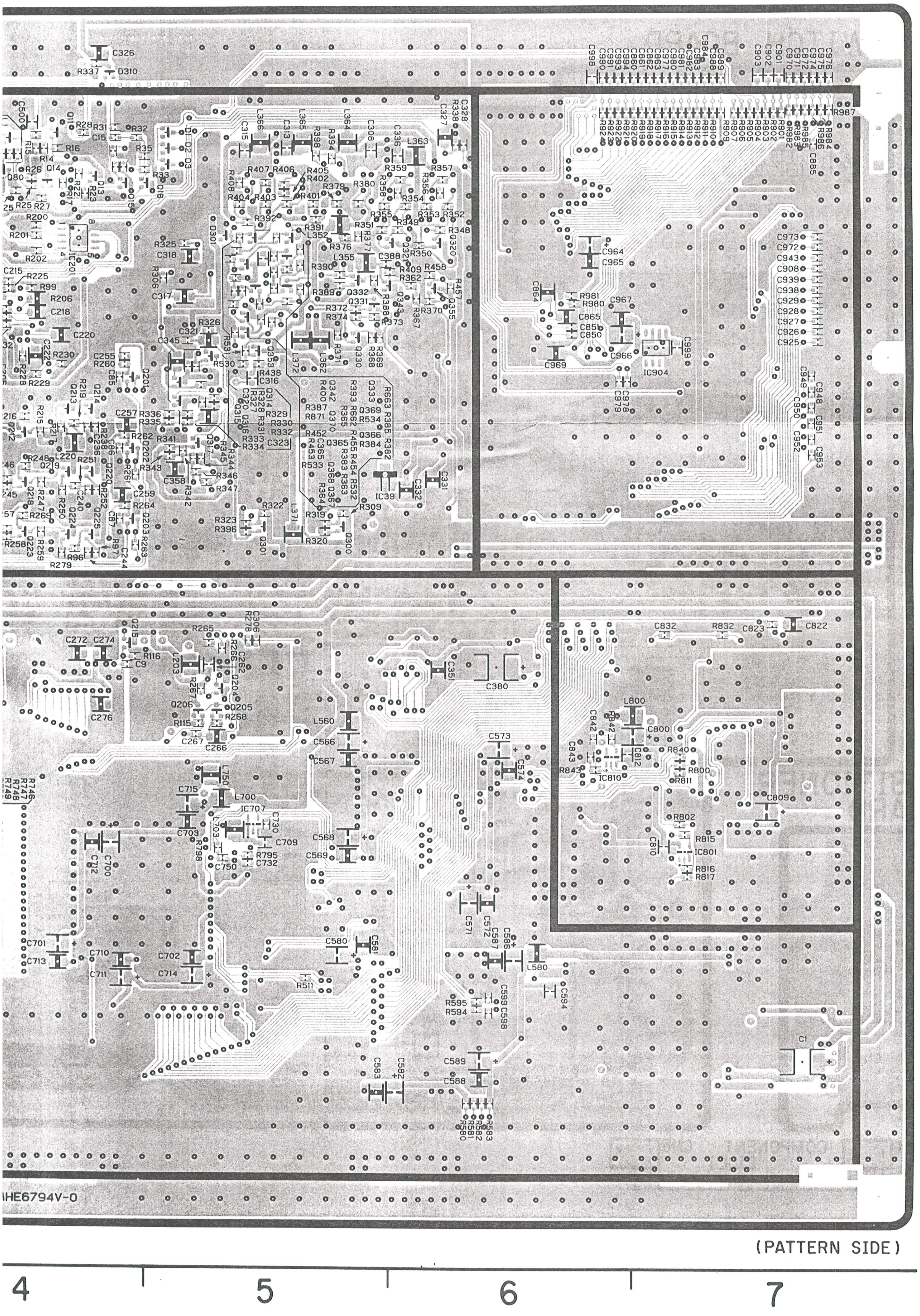
5 6 7 8 9

CONDUCTOR VIEW OF MAIN BOARD (PATTERN SIDE)

MAIN BOARD


E
D
C
B
A
1
2
3
4
5
JRZAVE7P2A (MAIN)
MHE6794V-0

OARD (PATTERN SIDE)



⟨Index⟩

MAIN BOARD
(PATTERN SIDE)

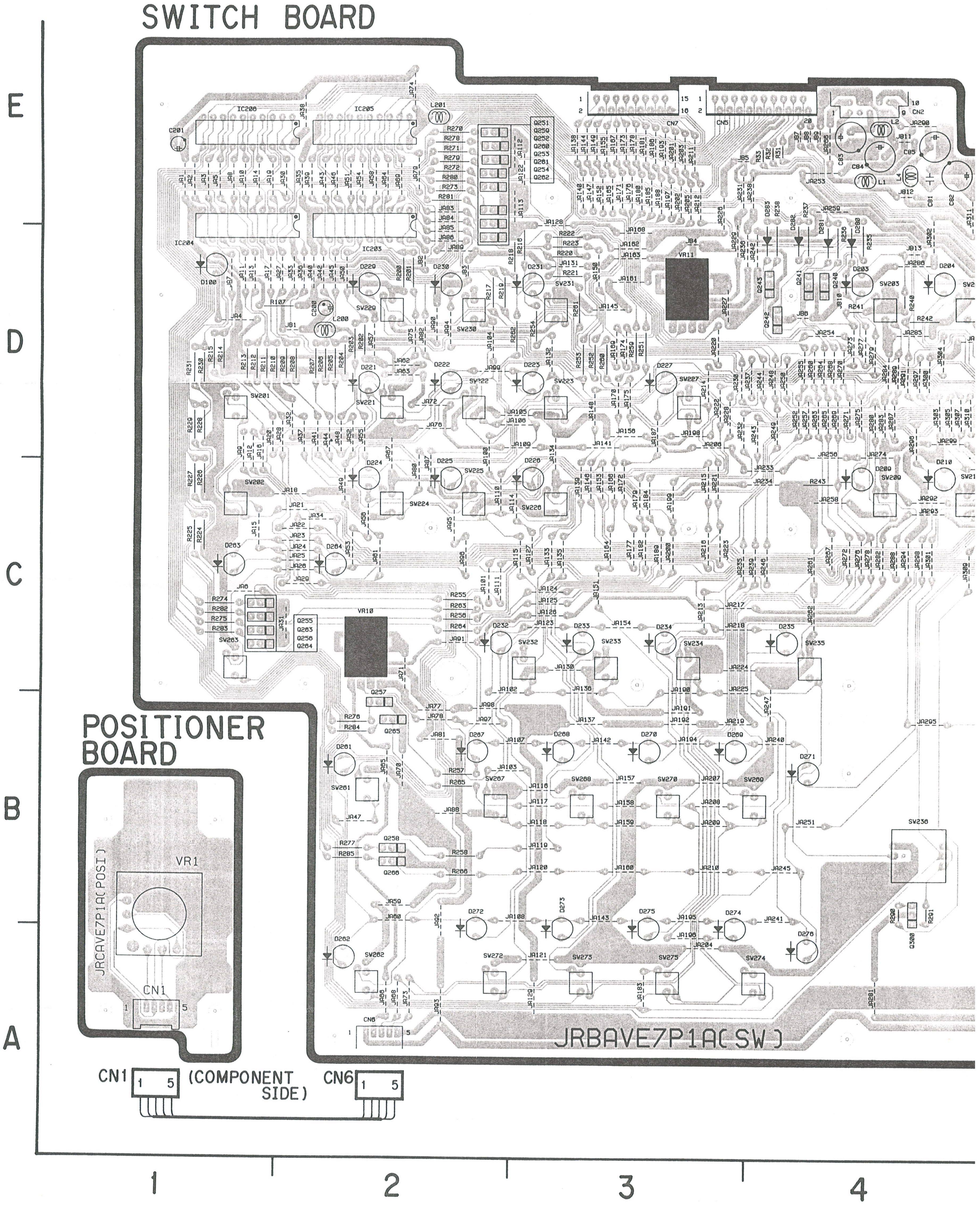
IC1	E3
IC39	D5
IC100	E1
IC102	E2
IC103	D1
IC104	E1
IC107	D1
IC201	E4
IC203	E4
IC204	E3
IC207	D3
IC208	D3
IC250	D3
IC251	D3
IC501	A1
IC502	A1
IC510	B1
IC707	B5
IC801	B7
IC810	C6
IC904	D7
Q10	E4
Q11	E4
Q12	E2
Q13	E4
Q14	E4
Q15	E4
Q16	E5
Q20	E2
Q21	E2
Q23	E2
Q24	E2
Q25	E2
Q26	E2
Q30	E1
Q31	E1
Q33	E1
Q34	E1
Q35	E2
Q36	E2
Q50	D3
Q80	E4
Q82	E2
Q84	E1
Q85	E1
Q101	D2
Q102	D2
Q103	D2
Q104	C3
Q105	C3
Q110	D1
Q111	D2
Q112	D2
Q113	D2
Q114	D2
Q115	C3
Q116	D1
Q117	D2
Q118	D2
Q119	D2
Q120	D2
Q121	D2
Q122	D2
Q123	D2
Q124	D2
Q125	D2
Q126	D2
Q127	C3
Q130	E3
Q131	E2
Q136	D1
Q140	D3
Q141	C3
Q151	D3
Q201	D4
Q202	D4
Q203	D4
Q204	C5
Q205	C5
Q206	C5
Q210	D3
Q211	D4
Q212	D4
Q213	D4
Q214	D4
Q215	C4
Q216	D3
Q217	D4
Q218	D4
Q219	D4
Q220	D4
Q221	D4
Q222	D4
Q223	D4
Q224	D4
Q225	D4
Q226	D4
Q300	D5
Q301	D5
Q310	C3
Q314	D5
Q315	D5
Q316	D5
Q317	D5
Q320	E6
Q321	E6
Q330	D5
Q331	E5
Q332	E5
Q333	D5
Q342	D5
Q343	E6
Q353	D5
Q355	E6
Q365	D5
Q366	D5
Q367	D5
Q368	D5
Q369	D5
Q370	D5
Q541	A1
Q701	B3
D1	E5
D2	E5
D3	E5
D4	E1
D5	E1
D301	E5
D310	E4
D550	A1

CONDUCTOR VIEW OF

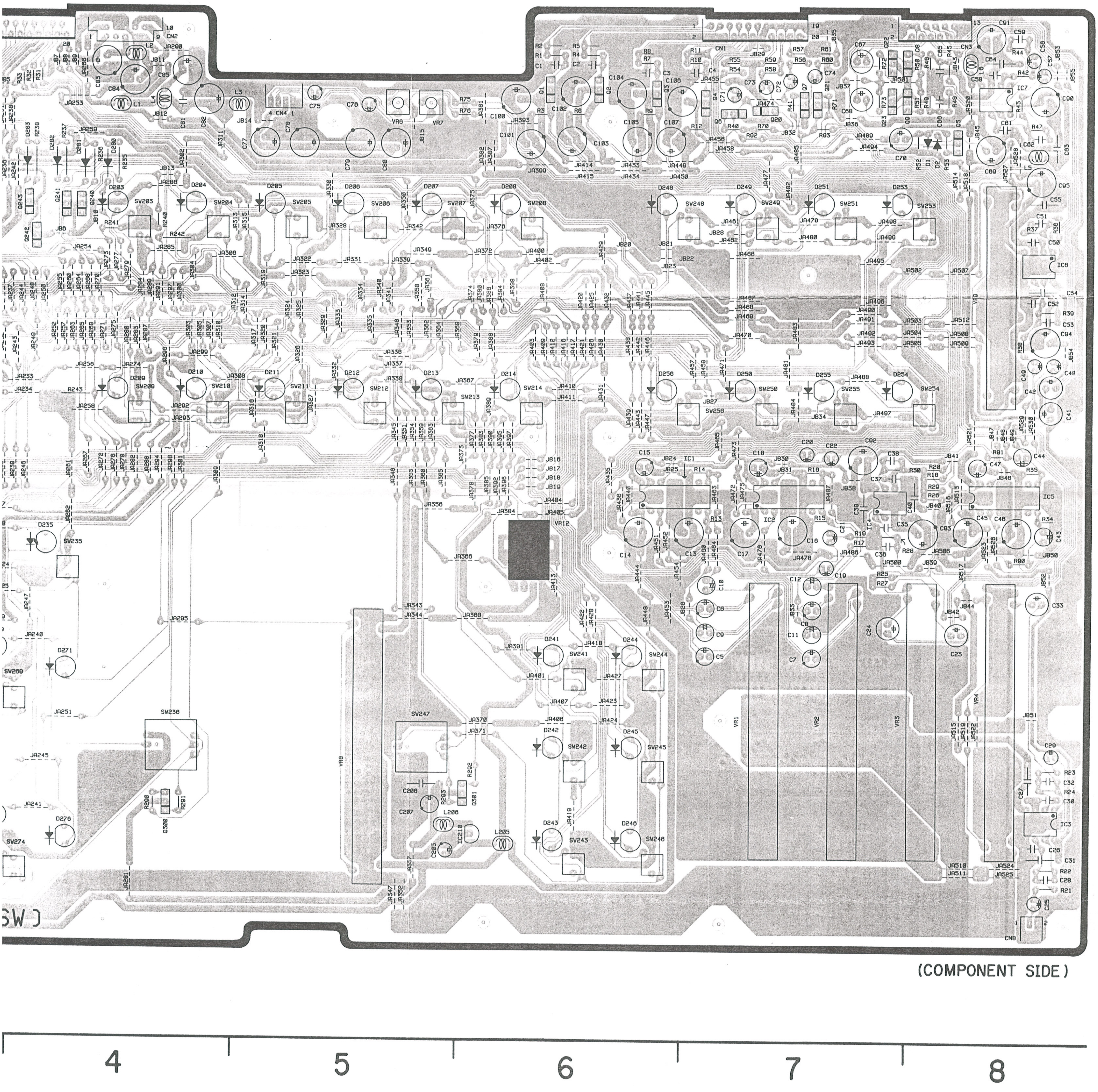
<Index>

SWITCH BOARD

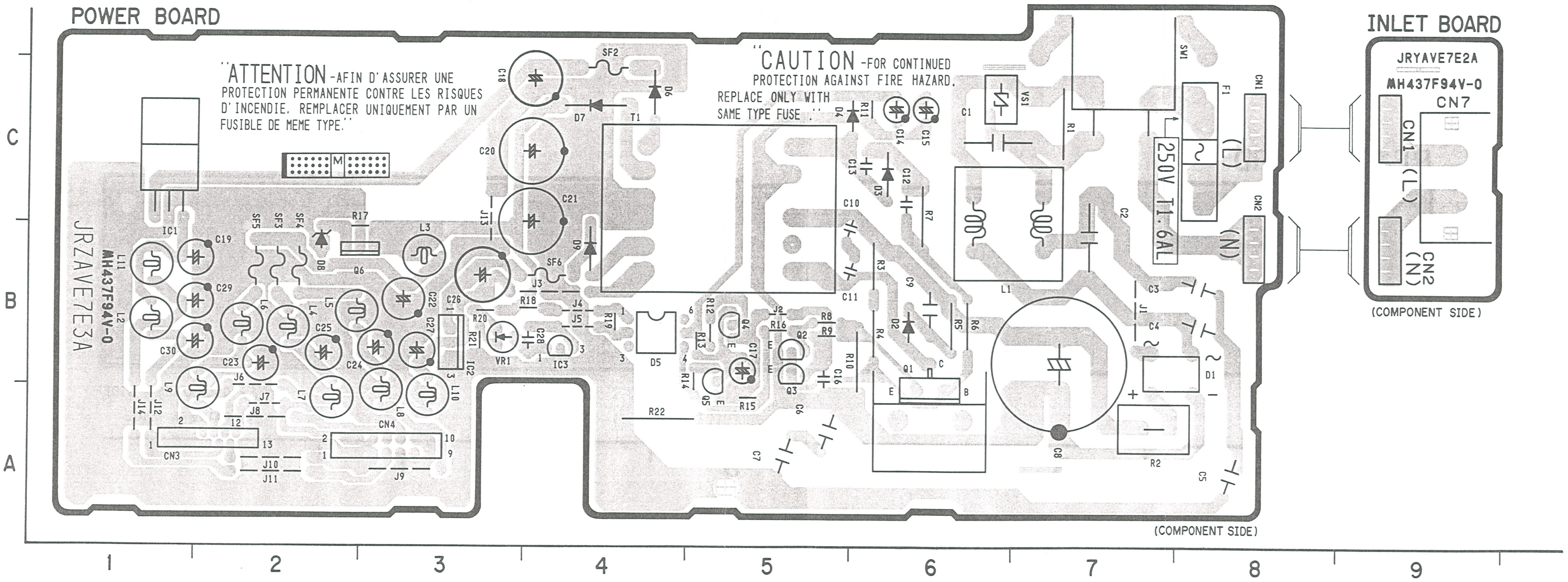
IC1	C7
IC2	C7
IC3	B8
IC4	C7
IC5	C8
IC6	D8
IC7	E8
IC203	D1
IC204	D2
IC205	E2
IC206	E1
IC210	A6
Q1	E6
Q2	E6
Q3	E6
Q4	E7
Q5	E8
Q6	E7
Q7	E7
Q8	E7
Q9	E7
Q20	E7
Q21	E7
Q22	E7
Q23	E7
Q240	D3
Q241	D3
Q242	D3
Q243	D3
Q251	E3
Q252	E3
Q253	E3
Q254	E3
Q255	C2
Q256	C2
Q257	B2
Q258	B2
Q259	E3
Q260	E3
Q261	E3
Q262	E3
Q263	C2
Q264	C2
Q265	B2
Q266	B2
Q300	A4
Q301	B6
D1	E8
D2	E8
D100	D1
D203	D4
D204	D4
D205	D5
D206	D5
D207	D5
D208	D6
D209	C4
D210	C4
D211	C5
D212	C5
D213	C5
D214	C6
D221	D2
D222	D2
D223	D3
D224	C2
D225	C2
D226	C3
D227	D3
D229	D2
D230	D2
D231	D3
D232	C2
D233	C3
D234	C3
D235	C4
D241	B6
D242	B6
D243	A6
D244	B6
D245	B6
D246	A6
D248	D6
D249	D7
D250	C7
D251	D7
D253	D7
D254	C7
D255	C7
D256	C6
D261	B2
D262	A2
D263	C1
D264	C2
D267	B2
D268	B3
D269	B3
D270	B3
D271	B4
D272	B2
D273	B3
D274	B3
D275	B3
D276	A4
D280	D4
D281	D4
D282	D4
D283	D4


SWITCH BOARD
POSITIONER BOARD
E
D
C
B
A
1
2
3
4
IC200
IC205
IC204
IC203
VR10
VR11
VR1
JRCAVE7P1A(POSI)
CN1
CN6
CN7
CN5
CN2
SW236
JRBAVE7P1A(SW)
CN1 1 5 (COMPONENT SIDE)
CN6 1 5

ɔNDUCTOR VIEW OF SWITCH BOARD


(COMPONENT SIDE)
CN1
CN2
CN3
CN4
CN9
IC1
IC2
IC3
IC4
IC5
IC6
IC7
VR1
VR2
VR3
VR4
VR6
VR7
VR8
VR9
VR12
SW236
SW247
4
5
6
7
8

CONDUCTOR VIEW OF POWER BOARD

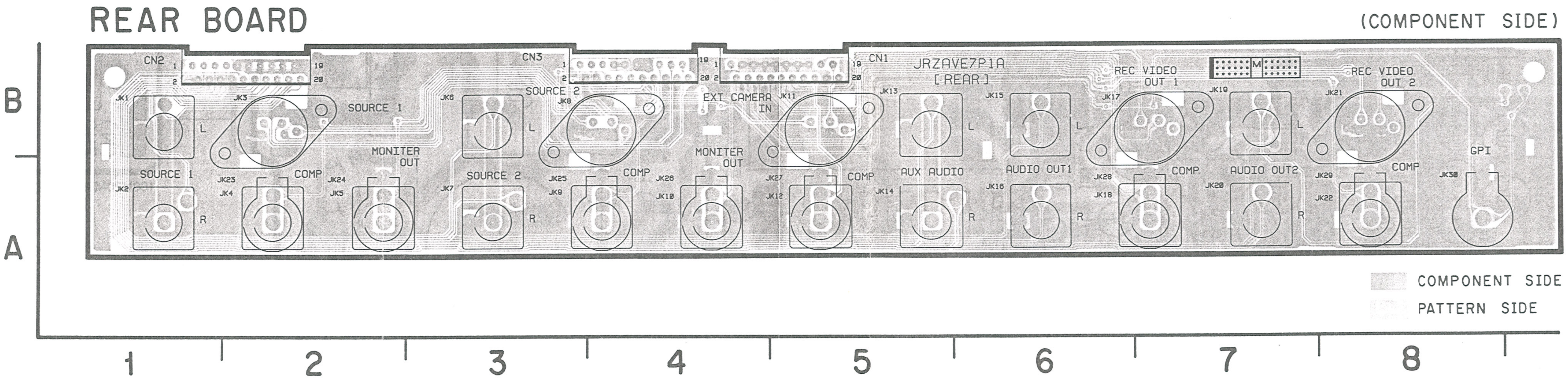

POWER BOARD
INLET BOARD
"ATTENTION -AFIN D'ASSURER UNE PROTECTION PERMANENTE CONTRE LES RISQUES D'INCENDIE. REMPLACER UNIQUEMENT PAR UN FUSIBLE DE MEME TYPE."
"CAUTION -FOR CONTINUED PROTECTION AGAINST FIRE HAZARD. REPLACE ONLY WITH SAME TYPE FUSE."
JRZAVE7E3A
MH437F94V-0
JRYAVE7E2A
MH437F94V-0
CN7
CN1 (L)
CN2 (N)
250V T1.6AL
(L)
(N)
(COMPONENT SIDE)
(COMPONENT SIDE)
IC1
IC2
IC3
Q1
Q2
Q3
Q4
Q5
Q6
D1
D2
D3
D4
D5
D6
D7
D8
D9
T1
L1
F1
SW1
VS1
VR1
CN1
CN2
CN3
CN4
SF2
SF3
SF4
SF5
SF6
R17
R18
R19
R20
R21
R22
C18
C20
C21
C8
A
B
C
1
2
3
4
5
6
7
8
9

⟨Index⟩

POWER BOARD

IC1	B1	D1	B8
IC2	B3	D2	B6
IC3	B4	D3	C6
Q1	B6	D4	C5
Q2	B5	D5	B4
Q3	B5	D6	C4
Q4	B5	D7	C4
Q5	A5	D8	B2
Q6	B2	D9	B4

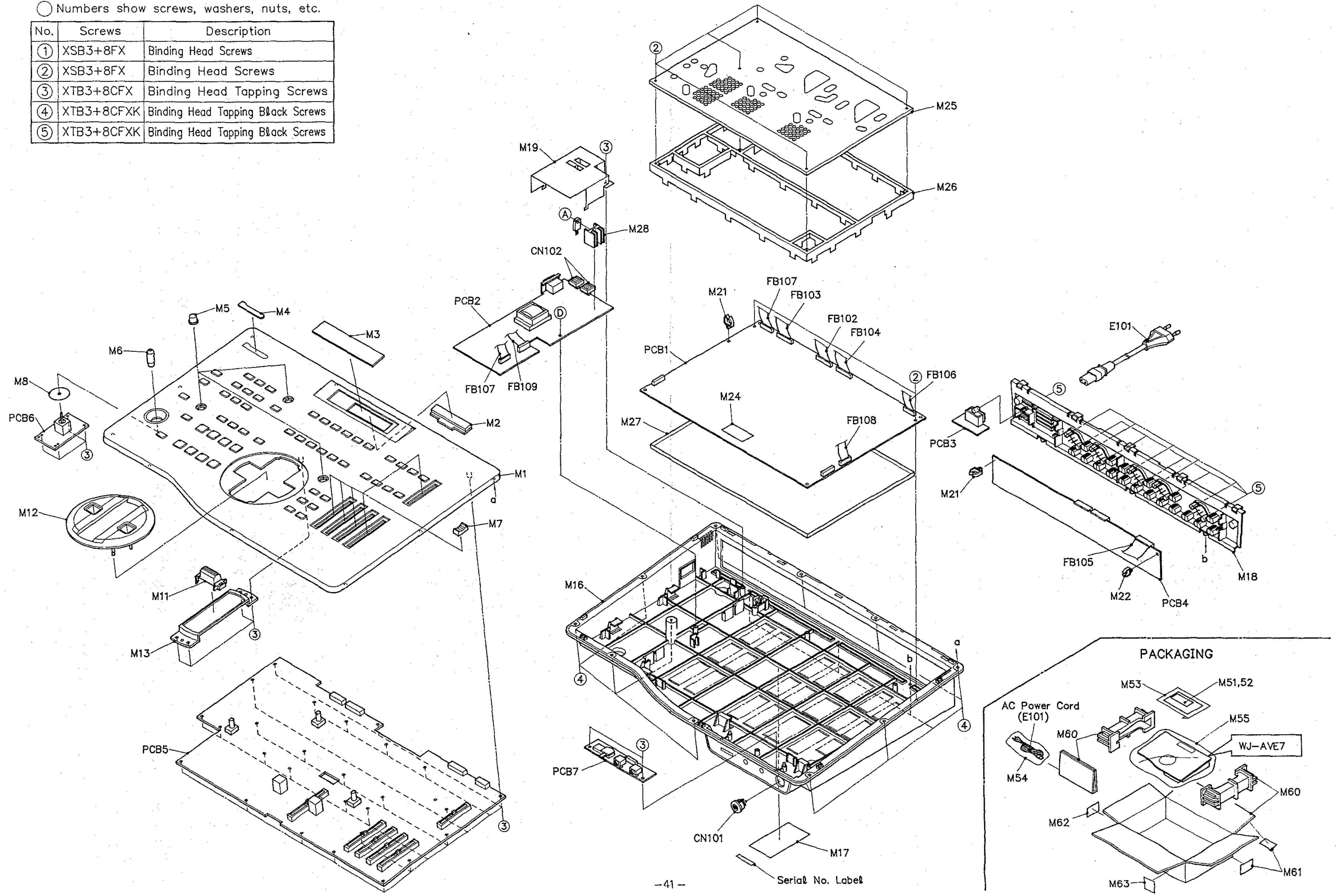
CONDUCTOR VIEW OF REAR BOARD


REAR BOARD
(COMPONENT SIDE)
CN2
CN3
CN1
JRZAVE7P1A
[REAR]
SOURCE 1
SOURCE 2
EXT CAMERA IN
REC VIDEO OUT 1
REC VIDEO OUT 2
MONITER OUT
COMP
AUX AUDIO
AUDIO OUT1
AUDIO OUT2
GPI
L
R
JK1
JK2
JK3
JK4
JK5
JK6
JK7
JK8
JK9
JK10
JK11
JK12
JK13
JK14
JK15
JK16
JK17
JK18
JK19
JK20
JK21
JK22
JK23
JK24
JK25
JK26
JK27
JK28
JK29
JK30
COMPONENT SIDE
PATTERN SIDE
A
B
1
2
3
4
5
6
7
8

EXPLODED VIEW

○ Numbers show screws, washers, nuts, etc.

No.	Screws	Description
①	XSB3+8FX	Binding Head Screws
②	XSB3+8FX	Binding Head Screws
③	XTB3+8CFX	Binding Head Tapping Screws
④	XTB3+8CFXK	Binding Head Tapping Black Screws
⑤	XTB3+8CFXK	Binding Head Tapping Black Screws



M25
M26
②
M19
③
Ⓐ
M28
CN102
PCB2
Ⓓ
FB107
FB109
M5
M4
M3
M6
M8
PCB6
M2
M1
a
M12
M7
M11
M13
PCB5
FB107
FB103
M21
FB102
FB104
PCB1
FB106
M24
M27
FB108
E101
PCB3
M21
FB105
M22
PCB4
M18
b
⑤
M16
④
PCB7
CN101
M17
Serial No. Label
PACKAGING
M53
M51,52
AC Power Cord
(E101)
M60
M55
WJ-AVE7
M54
M60
M62
M61
M63

REPLACEMENT PARTS LIST

Important Notice

1. Components identified by " ⚠ " mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
2. RTL : Retention Time Limited,

MISCELLANEOUS

REF.NO.	PART NO.	DESCRIPTION
FB101	YWJRZAVE7P4A	Flexible Board A
FB102	YWJRZAVE7P5A	Flexible Board B
FB103	YWJRZAVE7P6A	Flexible Board C
FB104	YWJRZAVE7P7A	Flexible Board D
FB105	YWJRZAVE7P8A	Flexible Board E
FB106	YWJRZAVE7P9A	Flexible Board F
FB107	YWAVE7A4	Flexible Board G
FB108	YWAVE7A5	Flexible Board H
FB109	YWFCHJJ01598	Flexible Board I
E101 ⚠	YWKP561KS15C	AC Power Cord for WJ-AVE7/A
	YWKP610KS15F	AC Power Cord for WJ-AVE7/B
	YWKP419KS15F	AC Power Cord for WJ-AVE7/G
CN101	YWD0111N624	10-pin Title Connector Assy
CN102 ⚠	YWTBGP05XB1	Joint Connector
M1	YWV0MA0145AN	Upper Cover Assy
M2	YWLI1244	Level Meter Assy
M3	YWV5WA1561A4	Panel
M4	YWV7PA0093A3	Panasonic Badge
M5	YWV5RB0372A3	Knob
M6	YWV5RA0334A3	Stick Lever
M7	YWV5RA0335A3	Knob
M8	YWV2VA0038A4	Blank Sheet for Stick Lever
M11	YWV5RA0400A3	Knob
M12	YWV5EA1310A2	Fader Cover
M13	YWV2EA0220A2	Guide
M16	YWV9AA0888AN	Bottom Cover Assy
M17 ⚠	YWV7QA3109A4	Main Label for WJ-AVE7/A
	YWV7QA3118A4	Main Label for WJ-AVE7/B
	YWV7QA3119B4	Main Label for WJ-AVE7/C
	YWV7QA3120A4	Main Label for WJ-AVE7/G
M18	YWV9AA0889AN	Rear Cover Assy
M19	YWV2PA0601A3	Insulator
M21	YWUAMS11V0	Cord Clamp A
M22	YWUAMS05LV0	Cord Clamp B

MAIN BOARD

REF.NO.	PART NO.	DESCRIPTION
PCB1 (RTL)	YWJKZAVE7E2A	Printed Circuit Board Assy
IC1	YWNJM2267M	IC
IC28	XN4501	IC
IC35,36	YWNJM3403AM	IC
IC39	79L05UATE2	IC
IC100	YWNJM2246M	IC
IC102	YWNJM2234M	IC
IC103	YWSC7S08F	IC
IC104	YW78L05UATE2	IC
IC105	YWM51271FP	IC
IC107	YWSC7S08F	IC
IC110	XN4501	IC
IC111	MC74HC4053F	IC
IC120,121	MN6550BS	IC
IC131	YWSC7S08F	IC
IC201	YWNJM2246M	IC
IC203	YWNJM2234M	IC
IC204	YW78L05UATE2	IC
IC205	YWM51271FP	IC
IC207,208	YWSC7S08F	IC
IC211	MC74HC4053F	IC
IC220,221	MN6550BS	IC
IC231	YWSC7S08F	IC
IC250,251	NJM2904M	IC
IC310	YWLM1881M	IC
IC320	YWNJM2246M	IC
IC330	NJM319M	IC
IC350	YW78L05UATE2	IC
IC360	YWUPC664GS	IC
IC361	YWSC7S08F	IC
IC501	YWSC7S02F	IC
IC502	YWSC7S08F	IC
IC503	YW78L09UATE2	IC
IC510	YWSC7S08F	IC
IC552	YWMD027AN004	IC
IC580	YWMD016AN005	IC
IC581	YWUPD42102G3	IC
IC600	MN53060LBZ	IC
IC601	YWSC7SU04F	IC
IC602-605	YWM5M4C500AV	IC
IC700	MN53060LBZ	IC
IC701	YWSC7SU04F	IC
IC702-705	YWM5M4C500AV	IC
IC707	YWSC7S08F	IC
IC800	MN676021PPS	IC

REF.NO.	PART NO.	DESCRIPTION
IC801	YWSC7SU04F	IC
IC802	MC74HC4053F	IC
IC803	MN53007LVW1	IC
IC804	YWUPD4528BG	IC
IC805	YWSC7S08F	IC
IC810	YWSC7SU04F	IC
IC811	YWSC7S08F	IC
IC900	YWH7337F0AV0	IC
IC901	YWM62352GP	IC
IC902	MC74HC374AF	IC
IC903	YW78L05UATE2	IC
IC904	YWM51953AFP	IC
Q10	2SC4081	Transistor
Q11	2SA1576	Transistor
Q12-16	2SC4081	Transistor
Q20	2SC4081	Transistor
Q21	2SA1576	Transistor
Q23-26	2SC4081	Transistor
Q30	2SC4081	Transistor
Q31	2SA1576	Transistor
Q33-36	2SC4081	Transistor
Q50,80	2SC4081	Transistor
Q81-85	2SC4081	Transistor
Q101-103	2SD1979	Transistor
Q104	2SA1576	Transistor
Q105	2SD1979	Transistor
Q110	2SA1576	Transistor
Q111-113	2SC4081	Transistor
Q114	2SA1576	Transistor
Q115	2SC4081	Transistor
Q116	2SA1576	Transistor
Q117-120	2SC4081	Transistor
Q121	2SA1576	Transistor
Q122-127	2SC4081	Transistor
Q130,131	2SC4081	Transistor
Q136,140	2SC4081	Transistor
Q141,151	2SC4081	Transistor
Q201-203	2SD1979	Transistor
Q204	2SA1576	Transistor
Q205	2SD1979	Transistor
Q206	2SC4081	Transistor
Q210	2SA1576	Transistor
Q211-213	2SC4081	Transistor
Q214	2SA1576	Transistor
Q215	2SC4081	Transistor
Q216	2SA1576	Transistor
Q217-220	2SC4081	Transistor
Q221	2SA1576	Transistor
Q222-226	2SC4081	Transistor
Q300,301	2SC4081	Transistor
Q310	2SC4081	Transistor
Q314	2SD1979	Transistor
Q315-317	2SC4081	Transistor
Q318,320	2SA1576	Transistor
Q321,322	2SC4081	Transistor

REF.NO.	PART NO.	DESCRIPTION	
Q323	2SA1576	Transistor	
Q324	2SC4081	Transistor	
Q325	2SA1576	Transistor	
Q326	2SC4081	Transistor	
Q327	2SA1576	Transistor	
Q328	2SC4081	Transistor	
Q329	2SA1576	Transistor	
Q330-332	2SC4081	Transistor	
Q333	2SA1576	Transistor	
Q334	2SC4081	Transistor	
Q335	2SA1576	Transistor	
Q336	2SC4081	Transistor	
Q337	2SA1576	Transistor	
Q338	2SC4081	Transistor	
Q339	2SA1576	Transistor	
Q340	2SC4081	Transistor	
Q341	2SA1576	Transistor	
Q342,343	2SC4081	Transistor	
Q353,355	2SC4081	Transistor	
Q360	2SC4081	Transistor	
Q361	2SA1576	Transistor	
Q362	2SC4081	Transistor	
Q363	2SA1576	Transistor	
Q365-372	2SC4081	Transistor	
Q541	2SC4081	Transistor	
Q580	2SK662-PQR	FET	
Q601	2SB1219-QRS	Transistor	
Q602	2SK662-PQR	FET	
Q701	2SB1219-QRS	Transistor	
Q702	2SK662-PQR	FET	
Q800,801	2SK662-PQR	FET	
Q991	2SB1219-QRS	Transistor	
Q995	2SA1576	Transistor	
D1-5	MA141K	Diode	
D300,301	MA141K	Diode	
D310	MA141K	Diode	
D550	MA741	Diode	
D590,600	1SV153	Diode	
D700,800	1SV153	Diode	
D801-803	1SV153	Diode	
D804,991	MA141K	Diode	
R1	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R2	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R3	YWR0816P202D	Metal	2K ohms 1/16W
R4	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R10	YWR0816Q750D	Metal	75 ohms 1/16W
R11	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R12	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R13	ERJ3GEYJ202	Carbon	2K ohms 1/16W
R14	ERJ3GEYJ333	Carbon	33K ohms 1/16W
R15	ERJ3GEYJ152	Carbon	1.5K ohms 1/16W
R16	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R17	YWR0816P102D	Metal	1K ohms 1/16W
R18	YWR0816P202D	Metal	2K ohms 1/16W
R20	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R22	YWR0816P102D	Metal	1K ohms 1/16W

REF.NO.	PART NO.	DESCRIPTION	
R23	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R25,26	YWR0816P202D	Metal	2K ohms 1/16W
R27	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R28	YWR0816Q750D	Metal	75 ohms 1/16W
R30	YWR0816P202D	Metal	2K ohms 1/16W
R31	YWR0816Q750D	Metal	75 ohms 1/16W
R32,33	YWR0816P202D	Metal	2K ohms 1/16W
R34	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R35	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R36,37	ERJ3GEYJ750	Carbon	75 ohms 1/16W
R39	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R40	YWR0816Q750D	Metal	75 ohms 1/16W
R41	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R42	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R43	ERJ3GEYJ202	Carbon	2K ohms 1/16W
R44	ERJ3GEYJ333	Carbon	33K ohms 1/16W
R45	ERJ3GEYJ152	Carbon	1.5K ohms 1/16W
R46	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R47	YWR0816P102D	Metal	1K ohms 1/16W
R48	YWR0816P202D	Metal	2K ohms 1/16W
R49	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R50	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R52	YWR0816P102D	Metal	1K ohms 1/16W
R53	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R55,56	YWR0816P202D	Metal	2K ohms 1/16W
R57	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R58	YWR0816Q750D	Metal	75 ohms 1/16W
R60	YWR0816P202D	Metal	2K ohms 1/16W
R61	YWR0816Q750D	Metal	75 ohms 1/16W
R62,63	YWR0816P202D	Metal	2K ohms 1/16W
R64	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R65	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R66	ERJ3GEYJ912	Carbon	9.1K ohms 1/16W
R67	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R70	YWR0816Q750D	Metal	75 ohms 1/16W
R71	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R72	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R73	ERJ3GEYJ202	Carbon	2K ohms 1/16W
R74	ERJ3GEYJ333	Carbon	33K ohms 1/16W
R75	ERJ3GEYJ152	Carbon	1.5K ohms 1/16W
R76	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R77	YWR0816P102D	Metal	1K ohms 1/16W
R78	YWR0816P202D	Metal	2K ohms 1/16W
R79	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R82	YWR0816P102D	Metal	1K ohms 1/16W
R83,84	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R85,86	YWR0816P202D	Metal	2K ohms 1/16W
R87	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R88	YWR0816Q750D	Metal	75 ohms 1/16W
R90	YWR0816P202D	Metal	2K ohms 1/16W
R91	YWR0816Q750D	Metal	75 ohms 1/16W
R93	YWR0816P202D	Metal	2K ohms 1/16W
R94	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R95	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R96	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R97	ERJ3GEYJ102	Carbon	1K ohms 1/16W

REF.NO.	PART NO.	DESCRIPTION	
R98,99	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R100-102	ERJ3GEYJ474	Carbon	470K ohms 1/16W
R103	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R104	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R105	ERJ8GEYJ200	Carbon	20 ohms 1/8W
R106,107	L311J103J332	Carbon	10K ohms
R108	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R109	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R110	ERJ3GEYJ912	Carbon	9.1K ohms 1/16W
R111	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R112	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R113	ERJ3GEYJ152	Carbon	1.5K ohms 1/16W
R114	ERJ3GEYJ242	Carbon	2.4K ohms 1/16W
R115	ERJ3GEYJ152	Carbon	1.5K ohms 1/16W
R116	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R120	ERJ3GEYJ433	Carbon	43K ohms 1/16W
R121	ERJ3GEYJ821	Carbon	820 ohms 1/16W
R122	ERJ3GEYJ393	Carbon	39K ohms 1/16W
R123	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R124	ERJ3GEYJ754	Carbon	750K ohms 1/16W
R125	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R126	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R127	ERJ3GEYJ474	Carbon	470K ohms 1/16W
R128	ERJ3GEYJ512	Carbon	5.1K ohms 1/16W
R129	YWR0816P912D	Metal	9.1K ohms 1/16W
R130	YWR0816P183D	Metal	18K ohms 1/16W
R131	ERJ3GEYJ620	Carbon	62 ohms 1/16W
R132	ERJ3GEYJ151	Carbon	150 ohms 1/16W
R136	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R137	ERJ3GEYJ183	Carbon	18K ohms 1/16W
R138	YWR0816P331D	Metal	330 ohms 1/16W
R139-141	YWR0816P102D	Metal	1K ohms 1/16W
R142	ERJ3GEYJ202	Carbon	2K ohms 1/16W
R143	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R144,145	YWR0816P102D	Metal	1K ohms 1/16W
R146	YWR0816P331D	Metal	330 ohms 1/16W
R147	YWR0816P102D	Metal	1K ohms 1/16W
R148	YWR0816P202D	Metal	2K ohms 1/16W
R149	YWR0816P102D	Metal	1K ohms 1/16W
R150	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R151	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R152	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R153	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R154	YWR0816P102D	Metal	1K ohms 1/16W
R155	ERJ3GEYJ202	Carbon	2K ohms 1/16W
R156	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R157	YWR0816P102D	Metal	1K ohms 1/16W
R158,159	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R160	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R161	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R162	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R163	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R164	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R165-167	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R168	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W

REF.NO.	PART NO.	DESCRIPTION	
R169	YWR0816P202D	Metal	2K ohms 1/16W
R172,173	ERJ8GEYJ200	Carbon	20 ohms 1/8W
R177	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R178	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R179	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R187	YWR0816P102D	Metal	1K ohms 1/16W
R188	ERJ3GEYJ202	Carbon	2K ohms 1/16W
R189	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R190	YWR0816P102D	Metal	1K ohms 1/16W
R191	YWR0816P151D	Metal	150 ohms 1/16W
R192	YWR0816P102D	Metal	1K ohms 1/16W
R193	YWR0816P202D	Metal	2K ohms 1/16W
R194	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R195	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R197	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R198	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R200-202	ERJ3GEYJ474	Carbon	470K ohms 1/16W
R203	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R206,207	L311J103J332	Carbon	3.3K ohms 1/16W
R208	ERJ3GEYJ562	Carbon	5.6K ohms 1/16W
R209	YWR0816P102D	Metal	1K ohms 1/16W
R210	ERJ3GEYJ202	Carbon	2K ohms 1/16W
R211	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R212	YWR0816P102D	Metal	1K ohms 1/16W
R213	YWR0816P151D	Metal	150 ohms 1/16W
R214	YWR0816P102D	Metal	1K ohms 1/16W
R215	YWR0816P202D	Metal	2K ohms 1/16W
R216	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R217	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R219	ERJ3GEYJ242	Carbon	2.4K ohms 1/16W
R220	ERJ3GEYJ433	Carbon	43K ohms 1/16W
R221	ERJ3GEYJ821	Carbon	820 ohms 1/16W
R222	ERJ3GEYJ393	Carbon	39K ohms 1/16W
R223	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R224	ERJ3GEYJ754	Carbon	750K ohms 1/16W
R225	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R226	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R227	ERJ3GEYJ474	Carbon	470K ohms 1/16W
R228	ERJ3GEYJ512	Carbon	5.1K ohms 1/16W
R229	YWR0816P912D	Metal	9.1K ohms 1/16W
R230	YWR0816P183D	Metal	18K ohms 1/16W
R231	ERJ3GEYJ620	Carbon	62 ohms 1/16W
R232	ERJ3GEYJ151	Carbon	150 ohms 1/16W
R236	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R237	ERJ3GEYJ183	Carbon	18K ohms 1/16W
R238	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R239,240	YWR0816P102D	Metal	1K ohms 1/16W
R241	ERJ3GEYJ202	Carbon	2K ohms 1/16W
R242	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R243,244	YWR0816P102D	Metal	1K ohms 1/16W
R245	YWR0816P331D	Metal	330 ohms 1/16W
R246	YWR0816P102D	Metal	1K ohms 1/16W
R247	YWR0816P202D	Metal	2K ohms 1/16W
R248	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R249	YWR0816P102D	Metal	1K ohms 1/16W
R250	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R251	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R252	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R253	YWR0816P102D	Metal	1K ohms 1/16W
R254	ERJ3GEYJ202	Carbon	2K ohms 1/16W
R255	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R256	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R257	YWR0816P331D	Metal	330 ohms 1/16W
R258	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R259	YWR0816P202D	Metal	2K ohms 1/16W
R260	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R261	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R262	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R263	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R264	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R265-267	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R268	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R269	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R270,271	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R272,273	ERJ8GEYJ200	Carbon	20 ohms 1/8W
R277,278	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R279	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R287-290	ERJ3GEYJ510	Carbon	51 ohms 1/16W
R292	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R293-296	ERJ3GEYJ510	Carbon	51 ohms 1/16W
R298	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R299	YWR0816P271D	Metal	270 ohms 1/16W
R300	YWR0816P101D	Metal	100 ohms 1/16W
R301,302	YWR0816P511D	Metal	510 ohms 1/16W
R303,304	YWR0816P121D	Metal	120 ohms 1/16W
R305	YWR0816P221D	Metal	220 ohms 1/16W
R306	ERJ3GEYJ474	Carbon	470K ohms 1/16W
R307	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R308	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R309	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R310,311	ERJ3GEYJ202	Carbon	2K ohms 1/16W
R312	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R313	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R314	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R315,316	ERJ3GEYJ202	Carbon	2K ohms 1/16W
R317	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R318	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R319	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R320	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R321	YWR0816P102D	Metal	1K ohms 1/16W
R322,323	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R325	ERJ3GEYJ684	Carbon	680K ohms 1/16W
R326-328	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R329,330	ERJ3GEYJ512	Carbon	5.1K ohms 1/16W
R331	ERJ3GEYJ123	Carbon	12K ohms 1/16W
R332	ERJ3GEYJ333	Carbon	33K ohms 1/16W
R333	ERJ3GEYJ243	Carbon	24K ohms 1/16W
R334	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R335	ERJ3GEYJ305	Carbon	3M ohms 1/16W
R336	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R337	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R338	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R339	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R340	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R341	ERJ3GEYJ512	Carbon	5.1K ohms 1/16W
R342	ERJ3GEYJ123	Carbon	12K ohms 1/16W
R343	ERJ3GEYJ333	Carbon	33K ohms 1/16W
R344	ERJ3GEYJ243	Carbon	24K ohms 1/16W
R345	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R346	ERJ3GEYJ305	Carbon	3M ohms 1/16W
R347	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R348,349	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R350,351	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R352-355	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R356-359	ERJ3GEYJ330	Carbon	33 ohms 1/16W
R360,362	YWR0816P102D	Metal	1K ohms 1/16W
R363	YWR0816P202D	Metal	2K ohms 1/16W
R364	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R365	YWR0816Q750D	Metal	75 ohms 1/16W
R366	YWR0816P222D	Metal	2.2K ohms 1/16W
R367	YWR0816P472D	Metal	4.7K ohms 1/16W
R368	ERJ3GEYJ912	Carbon	9.1K ohms 1/16W
R369	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R370,371	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R372	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R373	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R374	YWR0816P361D	Metal	360 ohms 1/16W
R376,377	ERJ3GEYJ512	Carbon	5.1K ohms 1/16W
R379,380	ERJ3GEYJ221	Carbon	220 ohms 1/16W
R382	YWR0816P332D	Metal	3.3K ohms 1/16W
R383	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R384	YWR0816P332D	Metal	3.3K ohms 1/16W
R385	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R387	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R388	YWR0816P202D	Metal	2K ohms 1/16W
R389	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R390	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R391,392	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R393	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R394	ERJ3GEYJ680	Carbon	68 ohms 1/16W
R395	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R396	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R397	YWR0816P102D	Metal	1K ohms 1/16W
R398	ERJ3GEYJ680	Carbon	68 ohms 1/16W
R399	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R400-404	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R405-408	ERJ3GEYJ330	Carbon	33 ohms 1/16W
R409	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R410	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R420	YWR0816P202D	Metal	2K ohms 1/16W
R421	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R422	YWR0816P202D	Metal	2K ohms 1/16W
R423	ERJ3GEYJ822	Carbon	8.2K ohms 1/16W
R424	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R425	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R426,427	YWR0816P202D	Metal	2K ohms 1/16W
R428	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R429	ERJ3GEYJ822	Carbon	8.2K ohms 1/16W
R430	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R431	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R432	YWR0816P202D	Metal	2K ohms 1/16W
R433	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R434	YWR0816P202D	Metal	2K ohms 1/16W
R435	ERJ3GEYJ822	Carbon	8.2K ohms 1/16W
R436	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R437	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R438	YWR0816P102D	Metal	1K ohms 1/16W
R440-443	ERJ3GEYJ510	Carbon	51 ohms 1/16W
R450,451	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R452-455	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R457,458	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R510	YWR0816P222D	Metal	2.2K ohms 1/16W
R511,515	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R516,517	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R530	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R531	YWR0816P271D	Metal	270 ohms 1/16W
R532,533	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R534	YWR0816P102D	Metal	1K ohms 1/16W
R536	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R538,539	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R543	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R544,545	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R549	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R550	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R552-554	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R555	YWR0816P202D	Metal	2K ohms 1/16W
R556	YWR0816P102D	Metal	1K ohms 1/16W
R557,558	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R560-575	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R576	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R578,579	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R580,581	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R583	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R584	ERJ3GEYJ105	Carbon	1M ohms 1/16W
R585	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R586	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R587	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R589	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W
R590	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R592	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R593	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R594	ERJ3GEYJ202	Carbon	2K ohms 1/16W
R595	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R599-614	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R616-628	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R630-651	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R653	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R655-660	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R661	ERJ3GEYJ392	Carbon	3.9K ohms 1/16W

REF.NO.	PART NO.	DESCRIPTION	
R662	YWR0816P222D	Metal	2.2K ohms 1/16W
R663	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R665	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R666	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R668,669	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R670-677	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R678	ERJ3GEYJ221	Carbon	220 ohms 1/16W
R681,682	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R683,684	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R685	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R686	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W
R687	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R688	ERJ3GEYJ333	Carbon	33K ohms 1/16W
R689	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R690	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R691	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R692	ERJ3GEYJ105	Carbon	1M ohms 1/16W
R693,696	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R700-714	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R716-728	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R729	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R730-751	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R755-760	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R761	ERJ3GEYJ392	Carbon	3.9K ohms 1/16W
R765	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R766	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R768,769	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R770-777	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R781,782	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R783,784	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R785	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R786	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W
R787	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R788	ERJ3GEYJ333	Carbon	33K ohms 1/16W
R789	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R790	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R791	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R792	ERJ3GEYJ105	Carbon	1M ohms 1/16W
R793,795	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R798	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R800	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R801	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R802	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R803,809	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R810	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R815	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R816	ERJ3GEYJ105	Carbon	1M ohms 1/16W
R817	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R818,819	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R821	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R822,823	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R824,825	ERJ3GEYJ202	Carbon	2K ohms 1/16W
R826	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R827	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R828	L311J103J332	Carbon	3.3K ohms 1/16W

REF.NO.	PART NO.	DESCRIPTION	
R829	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R831,832	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R833	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R834	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R835	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R836	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R840	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R841	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R842-844	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R855	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R860	ERJ3GEYJ392	Carbon	3.9K ohms 1/16W
R861,862	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R871	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R880	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R881,882	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R883-886	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R890	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R901-907	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R909-924	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R930-937	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R940-942	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R944-946	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R948-953	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R955,956	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R980	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R982-989	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R992	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R993	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R996	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R997	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R998	ERJ3GEYJ101	Carbon	100 ohms 1/16W
VR19,20	EVM1DSW30BE2	Variable Resistor	2.2K ohms
VR100	EVM1DSW30B54	Variable Resistor	50K ohms
VR101	EVM1DSW30B24	Variable Resistor	20K ohms
VR102,110	EVM1DSW30B14	Variable Resistor	10K ohms
VR120	EVM1DSW30BY2	Variable Resistor	330 ohms
VR200	EVM1DSW30B54	Variable Resistor	50K ohms
VR201	EVM1DSW30B24	Variable Resistor	20K ohms
VR202	EVM1DSW30B14	Variable Resistor	10K ohms
VR220	EVM1DSW30BY2	Variable Resistor	330 ohms
VR301-304	EVM1DSW30B13	Variable Resistor	1K ohms
VR305,306	EVM1DSW30B23	Variable Resistor	2K ohms
VR800	EVM1DSW30B24	Variable Resistor	20K ohms
C1	ECST1AD476ZR	Tantalum	47 µF 10V
C2	ECEV1CV470	Electrolytic	47 µF 16V
C3,4	ECEV1VA470	Electrolytic	47 µF 35V
C9	YW5CH330J5VB	Ceramic	33 pF
C10	ECEV1CV100	Electrolytic	10 µF 16V
C11	ECEV1CV470	Electrolytic	47 µF 16V
C13	YW5X222K5VB	Ceramic	2200 pF
C14	ECEV0JA331	Electrolytic	330 µF 6.3V
C15	YW5X222K5VB	Ceramic	2200 pF
C16	ECEV1CV470	Electrolytic	47 µF 16V
C20	ECEV1CV100	Electrolytic	10 µF 16V
C21	ECEV1CV470	Electrolytic	47 µF 16V

REF.NO.	PART NO.	DESCRIPTION	
C24	ECEV0JA331	Electrolytic	330 µF 6.3V
C25	YW5X222K5VB	Ceramic	2200 pF
C26	ECEV1CV470	Electrolytic	47 µF 16V
C30	ECEV0JV101	Electrolytic	100 µF 6.3V
C31	ECEV1CV220	Electrolytic	22 µF 16V
C32	ECEV1EV4R7	Electrolytic	4.7 µF 25V
C33	ECEV0JV101	Electrolytic	100 µF 6.3V
C34	ECEV1CV220	Electrolytic	22 µF 16V
C35	ECEV1EV4R7	Electrolytic	4.7 µF 25V
C37	ECST1AX106ZR	Tantalum	10 µF 10V
C40	ECEV1CV100	Electrolytic	10 µF 16V
C41	ECEV1CV470	Electrolytic	47 µF 16V
C44	ECEV0JA331	Electrolytic	330 µF 6.3V
C45	YW5X222K5VB	Ceramic	2200 pF
C46	ECEV1CV470	Electrolytic	47 µF 16V
C50	ECEV1EN3R3S	Electrolytic	3.3 µF 25V
C52,53	ECEV1EN3R3S	Electrolytic	3.3 µF 25V
C55-57	YWT316B104MT	Ceramic	0.1 µF
C59	ECEV1CV470	Electrolytic	47 µF 16V
C80-82	YW5CH330J5VB	Ceramic	33 pF
C83,84	YW5X103K2VB	Ceramic	0.01 µF
C85-87	YW5CH330J5VB	Ceramic	33 pF
C95,96	YF400224FZT	Ceramic	0.22µ F
C101	YW5CH101J5VB	Ceramic	100 pF
C102	ECST1AX106ZR	Tantalum	10 µF 16V
C103	YW5CH220J5VB	Ceramic	22 pF
C104	ECST1AX106ZR	Tantalum	10 µF 16V
C105	ECEV1CV100	Electrolytic	10 µF 16V
C106	YW5CH330J5VB	Ceramic	33 pF
C107	ECEV1HV010	Electrolytic	1 µF 50V
C108	ECEV1HVR47SR	Electrolytic	0.47 µF 50V
C109	ECEV1HV010	Electrolytic	1 µF 50V
C110,111	YW5F473Z2VB	Ceramic	0.047 µF
C112	YW5X102K5VB	Ceramic	1000 pF
C113	YWT316B104MT	Ceramic	0.1 µF
C114	ECEV0JV101	Electrolytic	100 µF 6.3V
C115	YW5X102K5VB	Ceramic	1000 pF
C116-118	YWT316B104MT	Ceramic	0.1 µF
C119	ECEV1HV010	Electrolytic	1 µF 50V
C120	YWT316B104MT	Ceramic	0.1 µF
C121	ECEV0JV470S	Electrolytic	47 µF 6.3V
C122	YWT316B104MT	Ceramic	0.1 µF
C123	ECEV1HV010	Electrolytic	1 µF 50V
C124	YWT316B104MT	Ceramic	0.1 µF
C125	YW5CH050D5VB	Ceramic	5 pF
C126	YW5CH561J5VB	Ceramic	560 pF
C127,129	YW5X102K5VB	Ceramic	1000 pF
C131	YW5CH201J5VB	Ceramic	200 pF
C132	ECEV1CV470	Electrolytic	47 µF 16V
C133	YWT316B104MT	Ceramic	0.1 µF

REF.NO.	PART NO.	DESCRIPTION	
C134	ECEV1CV470	Electrolytic	47 µF 16V
C135	YW5CH060D5VB	Ceramic	6 pF
C136	ECEV1CV470	Electrolytic	47 µF 16V
C137	YWT316B104MT	Ceramic	0.1 µF
C138	ECEV1CV470	Electrolytic	47 µF 16V
C139	YW5CH220J5VB	Ceramic	22 pF
C141	ECEV1CV100	Electrolytic	10 µF 16V
C142	ECEV1CV470	Electrolytic	47 µF 16V
C143	YW5X222K5VB	Ceramic	2200 pF
C144-146	YWT316B104MT	Ceramic	0.1 µF
C147-149	ECEV1EN3R3S	Electrolytic	3.3 µF 25V
C150	YW5CH330J5VB	Ceramic	33 pF
C151	ECEV1CV100	Electrolytic	10 µF 16V
C152	ECEV0JV470S	Electrolytic	47 µF 6.3V
C153	YW5X102K5VB	Ceramic	1000 pF
C154	YF400224FZT	Ceramic	0.22 µF
C155	ECEV1HV2R2	Electrolytic	2.2 µF 50V
C156	ECEV0JV470S	Electrolytic	47 µF 6.3V
C157	YWT316B104MT	Ceramic	0.1 µF
C158	ECEV1HV2R2	Electrolytic	2.2 µF 50V
C159	ECEV0JV470S	Electrolytic	47 µF 6.3V
C160	YWT316B104MT	Ceramic	0.1 µF
C161,162	YW5CH220J5VB	Ceramic	22 pF
C163	YF400224FZT	Ceramic	0.22 µF
C164	ECST1AX106ZR	Tantalum	10 µF 10V
C165	ECEV1EN3R3S	Electrolytic	3.3 µF 25V
C166	ECEV1CV470	Electrolytic	47 µF 16V
C167	YWT316B104MT	Ceramic	0.1 µF
C168	ECEV1CV470	Electrolytic	47 µF 16V
C170	YWT316B104MT	Ceramic	0.1 µF
C171	ECST1AX106ZR	Tantalum	10 µF 10V
C172	YWT316B104MT	Ceramic	0.1 µF
C173	TAJD336M010	Electrolytic	33 µF 10V
C174,175	YWT316B104MT	Ceramic	0.1 µF
C176	ECST1AX106ZR	Tantalum	10 µF 10V
C177	YWT316B104MT	Ceramic	0.1 µF
C178	TAJD336M010	Electrolytic	33 µF 10V
C179	YWT316B104MT	Ceramic	0.1 µF
C180	ECEV0JV470S	Electrolytic	47 µF 6.3V
C181	ECEV1CV470	Electrolytic	47 µF 16V
C182	ECEV0JV470S	Electrolytic	47 µF 6.3V
C183	YW5CH101J5VB	Ceramic	100 pF
C184	ECEV1CV100	Electrolytic	10 µF 16V
C185	ECEV1CA101	Electrolytic	100 µF 16V
C186	YW5CH130J5VB	Ceramic	13 pF
C187	ECEV0JV470S	Electrolytic	47 µF 6.3V
C188	ECEV1CV100	Electrolytic	10 µF 16V
C190	YW5CH330J5VB	Ceramic	33 pF
C191	ECEV0JV470S	Electrolytic	47 µF 6.3V
C192	ECEV1CV100	Electrolytic	10 µF 16V
C194	YW5CH330J5VB	Ceramic	33 pF
C195	ECEV1CV470	Electrolytic	47 µF 16V
C196	YW5X222K5VB	Ceramic	2200 pF
C197	YW5CH220J5VB	Ceramic	22 pF
C199	ECEV1CV100	Electrolytic	10 µF 16V

REF.NO.	PART NO.	DESCRIPTION	
C200	ECEV1CV470	Electrolytic	47 µF 16V
C201	YW5CH101J5VB	Ceramic	100 pF
C202	ECST1AX106ZR	Tantalum	10 µF 10V
C203	ECEV1CV470	Electrolytic	47 µF 16V
C205	ECST1AX106ZR	Tantalum	10 µF 10V
C206	YW5CH060D5VB	Ceramic	6 pF
C207	ECEV1HV010	Electrolytic	1 µF 50V
C208	ECEV1HVR47SR	Electrolytic	0.47 µF 50V
C209	ECEV1HV010	Electrolytic	1 µF 50V
C210,211	YW5F473Z2VB	Ceramic	0.047 µF
C212	YW5X102K5VB	Ceramic	1000 pF
C213	YWT316B104MT	Ceramic	0.1 µF
C214	ECEV0JV101	Electrolytic	100 µF 6.3V
C215	YW5X102K5VB	Ceramic	1000 pF
C216-218	YWT316B104MT	Ceramic	0.1 µF
C219	ECEV1HV010	Electrolytic	1 µF 50V
C220	YWT316B104MT	Ceramic	0.1 µF
C221	ECEV0JV470S	Electrolytic	47 µF 6.3V
C222	YWT316B104MT	Ceramic	0.1 µF
C223	ECEV1HV010	Electrolytic	1 µF 50V
C224	YWT316B104MT	Ceramic	0.1 µF
C225	YW5CH050D5VB	Ceramic	5 pF
C226	YW5CH561J5VB	Ceramic	560 pF
C227,229	YW5X102K5VB	Ceramic	1000 pF
C231	YW5CH201J5VB	Ceramic	200 pF
C232	ECEV0JV470S	Electrolytic	47 µF 6.3V
C233	YW5CH101J5VB	Ceramic	100 pF
C234	ECEV1CV100	Electrolytic	10 µF 16V
C235	ECEV1CA101	Electrolytic	100 µF 16V
C236	YW5CH130J5VB	Ceramic	13 pF (CH)
C237	ECEV0JV470S	Electrolytic	47 µF 6.3V
C238	ECEV1CV100	Electrolytic	10 µF 16V
C240	YW5CH330J5VB	Ceramic	33 pF
C241	ECEV0JV470S	Electrolytic	47 µF 6.3V
C242	ECEV1CV100	Electrolytic	10 µF 16V
C244	YW5CH330J5VB	Ceramic	33 pF
C245	ECEV1CV100	Electrolytic	10 µF 10V
C248	ECEV1CV470	Electrolytic	47 µF 10V
C250,253	ECEV1HV2R2	Electrolytic	2.2 µF 50V
C254	ECEV0JV470S	Electrolytic	47 µF 6.3V
C255	YW5X102K5VB	Ceramic	1000 pF
C256	ECEV0JV470S	Electrolytic	47 µF 6.3V
C257	YWT316B104MT	Ceramic	0.1 µF
C258	ECEV0JV470S	Electrolytic	47 µF 6.3V
C259	YWT316B104MT	Ceramic	0.1 µF
C260,261	YW5CH220J5VB	Ceramic	22 pF
C262	YF400224FZT	Ceramic	0.22 µF
C263	ECST1AX106ZR	Tantalum	10 µF 10V
C264	ECEV1EN3R3S	Electrolytic	3.3 µF 25V
C265	ECEV1CV470	Electrolytic	47µF 16V
C266	YWT316B104MT	Ceramic	0.1 µF
C267	YW5CH330J5VB	Ceramic	33 pF
C268	YF400224FZT	Ceramic	0.22 µF
C270	ECEV0JV470S	Electrolytic	47 µF 6.3V
C271	ECEV1CV470	Electrolytic	47 µF 16V
C272	YWT316B104MT	Ceramic	0.1 µF
C273	ECST1AX106ZR	Tantalum	10 µF 10V
C274	YWT316B104MT	Ceramic	0.1 µF
C275	TAJD336M010	Electrolytic	33 µF 10V
C276,280	YWT316B104MT	Ceramic	0.1 µF
C281	ECST1AX106ZR	Tantalum	10 µF 16V
C282	YWT316B104MT	Ceramic	0.1 µF
C283	TAJD336M010	Electrolytic	33 µF 10V
C284-290	YWT316B104MT	Ceramic	0.1 µF
C293,295	YWT316B104MT	Ceramic	0.1 µF
C296-304	YWT316B104MT	Ceramic	0.1 µF
C305,306	YW5CH330J5VB	Ceramic	33 pF
C307	ECEV1CV470	Electrolytic	47 µF 16V
C308	YF400224FZT	Ceramic	0.22 µF
C309,310	ECEV1CV470	Electrolytic	47 µF 16V
C311	ECEV1CA101	Electrolytic	100 µF 16V
C312	ECEV1CV470	Electrolytic	47 µF 16V
C313	YF400224FZT	Ceramic	0.22 µF
C314	ECEV1CV470	Electrolytic	47 µF 16V
C315,316	YF400224FZT	Ceramic	0.22 µF
C317,318	YWT316B104MT	Ceramic	0.1 µF
C319	ECEV1CV470	Electrolytic	47 µF 16V
C320,321	YWT316B104MT	Ceramic	0.1 µF
C322	ECEV0JV470S	Electrolytic	47 µF 6.3V
C323	YWT316B104MT	Ceramic	0.1 µF
C324	ECEV1CV220	Electrolytic	22 µF 16V
C325	ECEV1CV470	Electrolytic	47 µF 16V
C326,327	YWT316B104MT	Ceramic	0.1 µF
C328	YW5CH101J5VB	Ceramic	100 pF
C329	YWT316B104MT	Ceramic	0.1 µF
C330	ECEV1VA470	Electrolytic	47 µF 35V
C331,332	YWT316B104MT	Ceramic	0.1 µF
C333,335	ECEV1CV470	Electrolytic	47 µF 16V
C336	YF400224FZT	Ceramic	0.22 µF
C337	ECEV1EN3R3S	Electrolytic	3.3 µF 25V
C338	ECEV1CV470	Electrolytic	47 µF 16V
C339	YWT316B104MT	Ceramic	0.1 µF
C340	ECEV1CV470	Electrolytic	47 µF 16V
C342	YWT316B104MT	Ceramic	0.1 µF
C345	YW5CH330J5VB	Ceramic	33 pF
C346,347	YWT316B104MT	Ceramic	0.1 µF
C348	ECEV1HV010	Electrolytic	1 µF 50V
C349	YWT316B104MT	Ceramic	0.1 µF
C350	ECST1AD476ZR	Electrolytic	47 µF 10V
C351	YWT316B104MT	Ceramic	0.1 µF
C352	ECST1AD476ZR	Electrolytic	47 µF 10V
C353	ECEV0JV470S	Electrolytic	47 µF 6.3V
C354	YW5X222K5VB	Ceramic	2200 pF
C358	YWT316B104MT	Ceramic	0.1 µF
C360	ECEV1CV220	Electrolytic	22 µF 16V
C363	ECEV1CA101	Electrolytic	100 µF 16V
C364	ECEV1CV100	Electrolytic	10 µF 16V
C365	YW5X222K5VB	Ceramic	2200 pF
C366	YF400224FZT	Ceramic	0.22 µF
C367	YW5CH390J5VB	Ceramic	39 pF

REF.NO.	PART NO.	DESCRIPTION	
C370	ECEV1EV4R7	Electrolytic	4.7 µF 25V
C373	ECEV1CV470	Electrolytic	47 µF 16V
C375,377	YW5X222K5VB	Ceramic	2200 pF
C380	ECST1CD336	Tantalum	33 µF 16V
C383	ECEV1EV4R7	Electrolytic	4.7 µF 25V
C385	ECEV0JV470S	Electrolytic	47 µF 6.3V
C386	ECEV1EV4R7	Electrolytic	4.7 µF 25V
C388	YW5CH050D5VB	Ceramic	5 pF
C389	YW5CH330J5VB	Ceramic	33 pF
C390,391	YWT316B104MT	Ceramic	0.1 µF
C500-502	YF400224FZT	Ceramic	0.22 µF
C505	YF400224FZT	Ceramic	0.22 µF
C510	YW5CH220J5VB	Ceramic	22 pF
C540	YW5CH330J5VB	Ceramic	33 pF
C541	YF400224FZT	Ceramic	0.22 µF
C542,543	YW5CH330J5VB	Ceramic	33 pF
C544	YW5CH101J5VB	Ceramic	100 pF
C545	YW5CH330J5VB	Ceramic	33 pF
C546	YW5CH101J5VB	Ceramic	100 pF
C549	YW5CH330J5VB	Ceramic	33 pF
C550	YW5CH101J5VB	Ceramic	100 pF
C552	YF400224FZT	Ceramic	0.22 µF
C553	YWT316B104MT	Ceramic	0.1 µF
C554,555	ECEV1CV470	Electrolytic	47 µF 16V
C556	YWT316B104MT	Ceramic	0.1 µF
C558	YW5CH330J5VB	Ceramic	33 pF
C560-565	YW5CH101J5VB	Ceramic	100 pF
C573	ECST1AX106ZR	Tantalum	10 µF 10V
C574,588	YWT316B104MT	Ceramic	0.1 µF
C589	ECST1AX106ZR	Tantalum	10 µF 10V
C590	YW5CH240J5VB	Ceramic	24 pF 50V
C591	YW5CH330J5VB	Ceramic	33 pF
C592	ECEV1HV2R2	Electrolytic	22 µF 50V
C593	YW5X332K5VB	Ceramic	3300 pF
C594	YF400224FZT	Ceramic	0.22 µF
C598	YW5CH561J5VB	Ceramic	560 pF
C599	YW5CH330J5VB	Ceramic	33 pF
C600	ECST1AX106ZR	Tantalum	10 µF 10V
C602,603	YWT316B104MT	Ceramic	0.1 µF
C604	ECST1AD476ZR	Tantalum	47 µF 10V
C605	YWT316B104MT	Ceramic	0.1 µF
C606,607	ECEV0JA471	Electrolytic	470 µF 6.3V
C608	ECEV1CV220	Electrolytic	22 µF 16V
C612,613	YWT316B104MT	Ceramic	0.1 µF
C616,617	YW5CH330J5VB	Ceramic	33 pF
C618	YW5CH680J5VB	Ceramic	68 pF
C620	YF400224FZT	Ceramic	0.22 µF
C621	YW5CH330J5VB	Ceramic	33 pF
C622	YW5CH101J5VB	Ceramic	100 pF
C623	YW5X103K2VB	Ceramic	0.01 µF
C624	YW5CH330J5VB	Ceramic	33 pF
C625	ECEV1HV2R2	Electrolytic	2.2 µF 50V
C626	YW5X332K5VB	Ceramic	3300 pF
C627	YW5CH330J5VB	Ceramic	33 pF
C628	YW5CH220J5VB	Ceramic	22 pF
C629	YW5CH330J5VB	Ceramic	33 pF
C700	ECST1AX106ZR	Tantalum	10 µF 10V
C702,703	YWT316B104MT	Ceramic	0.1 µF
C704	ECST1AD476ZR	Tantalum	47µ F 10V
C705	YWT316B104MT	Ceramic	0.1 µF
C706,707	ECEV0JA471	Electrolytic	470 µF 6.3V
C708	ECEV1CV220	Electrolytic	22 µF 16V
C709	YF400224FZT	Ceramic	0.22 µF
C712,713	YWT316B104MT	Ceramic	0.1 µF
C720	YF400224FZT	Ceramic	0.22 µF
C721	YW5CH330J5VB	Ceramic	33 pF
C722	YW5CH101J5VB	Ceramic	100 pF
C723	YW5X103K2VB	Ceramic	0.01 µF
C724	YW5CH330J5VB	Ceramic	33 pF
C725	ECEV1HV2R2	Electrolytic	2.2 µF 50V
C726	YW5X332K5VB	Ceramic	3300 pF
C727	YW5CH330J5VB	Ceramic	33 pF
C728	YW5CH220J5VB	Ceramic	22 pF
C730,732	YW5CH330J5VB	Ceramic	33 pF
C750	YW5CH330J5VB	Ceramic	33 pF
C800	ECST1AX106ZR	Tantalum	10 µF 10V
C801,802	YW5CH820J5VB	Ceramic	82 pF
C803	YW5CH201J5VB	Ceramic	200 pF
C804	ECEV1HV2R2	Electrolytic	2.2 µF 50V
C805	YW5X103K2VB	Ceramic	0.01 µF
C806	ECEV1HV2R2	Electrolytic	2.2 µF 50V
C807	YW5X103K2VB	Ceramic	0.01 µF
C808	ECEV1CV220	Electrolytic	22 µF 16V
C809	ECST1AX106ZR	Tantalum	10 µF 10V
C810	YF400224FZT	Ceramic	0.22 µF
C811	YW5CH271J5VB	Ceramic	270 pF
C812,813	YF400224FZT	Ceramic	0.22 µF
C820	YW5CH100J5VB	Ceramic	10 pF
C821	YF400224FZT	Ceramic	0.22 µF
C822	YWT316B104MT	Ceramic	0.1 µF
C823,824	YW5CH330J5VB	Ceramic	33 pF
C825	ECST1AX106Z	Tantalum	10 µF 10V
C830,831	YW5CH561J5VB	Ceramic	560 pF
C832,841	YW5CH201J5VB	Ceramic	200 pF
C842-844	YW5CH330J5VB	Ceramic	33 pF
C850,851	YW5CH330J5VB	Ceramic	33 pF
C852	ECEV1CV220	Electrolytic	22 µF 16V
C853-855	ECEV1CG331	Electrolytic	330 µF 16V
C856	ECST1AX106Z	Tantalum	10 µF 10V
C857	TAJD336M010	Electrolytic	33 µF 10V
C860-863	YW5CH101J5VB	Ceramic	100 pF
C864,865	YWT316B104MT	Ceramic	0.1 µF
C872,880	YW5CH101J5VB	Ceramic	100 pF
C881-885	YW5CH101J5VB	Ceramic	100 pF
C901-907	YF400224FZT	Ceramic	0.22 µF

REF.NO.	PART NO.	DESCRIPTION	
C908-959	YW5CH101J5VB	Ceramic	100 pF
C960,961	YW5CH050D5VB	Ceramic	5 pF
C962	ECST1AX106Z	Tantalum	10 µF 10V
C963,965	YWT316B104MT	Ceramic	0.1 µF
C967	YWT316B104MT	Ceramic	0.1 µF
C968	ECST1AX106Z	Tantalum	10 µF 10V
C969	YWT316B104MT	Ceramic	0.1 µF
C970-977	YW5CH101J5VB	Ceramic	100 pF
C978,979	YW5CH330J5VB	Ceramic	33 pF
C980-984	YW5CH101J5VB	Ceramic	100 pF
C985-987	YWT316B104MT	Ceramic	0.1 µF
C988-994	YW5CH101J5VB	Ceramic	100 pF
C995,996	YWT316B104MT	Ceramic	0.1 µF
C997	YW5CH101J5VB	Ceramic	100 pF
C998,999	YF400224FZT	Ceramic	0.22 µF
CT100,200	YWTZBX4Z06AA	Trimmer Capacitor	
L100	YWNL322R2J	Coil	2.2 µH
L103-106	YWNL32220J	Coil	22 µH
L111	YWNL32220J	Coil	22 µH
L120	YWNL32101J	Coil	100 µH
L200	YWNL322R2J	Coil	2.2 µH
L203-206	YWNL32220J	Coil	22 µH
L211	YWNL32220J	Coil	22 µH
L220	YWNL32101J	Coil	100 µH
L350	YWNL322R2J	Coil	2.2 µH
L352,353	YWNL32220J	Coil	22 µH
L355	YWNL32820J	Coil	82 µH
L356,357	YWNL322R2J	Coil	2.2 µH
L361-366	YWNL32220J	Coil	22 µH
L371,372	YWNL32220J	Coil	22 µH
L500-502	YWBLM21A05PT	Coil	
L540	YWNL321R0J	Coil	1 µH
L541	YWNL32220J	Coil	22 µH
L560,580	YWNL321R0J	Coil	1 µH
L581	YW5206JPS052	Coil	
L582	YWNL32220J	Coil	22 µH
L583	YWNL32100J	Coil	10 µH
L600	YWNL32220J	Coil	22 µH
L601	YWNL321R0J	Coil	1 µH
L602	YW5206JPS052	Coil	
L650,700	YWNL32220J	Coil	22 µH
L701	YWNL321R0J	Coil	1 µH
L702	YW5206JPS052	Coil	
L703,750	YWNL32220J	Coil	22 µH
L800	YWNL32220J	Coil	22 µH
L801	YWNL328R2J	Coil	8.2 µH
L810,811	YWNL321R0J	Coil	1 µH
L900,901	YWNL321R0J	Coil	1 µH
L902,903	YWNL322R2J	Coil	2.2 µH
L905	YWNL322R2J	Coil	2.2 µH
L107-109	ERJ8GCS0R00	Carbon	0 ohms 1/16W
X1,2	YWDX17R734	Crystal Oscillator	
X800	YWAT4R40625G	Crystal Oscillator	
X801	YWDX17R734	Crystal Oscillator	
X900	YWCSAC16MX04	Oscillator	
CF1,4	YW4FS6499	Filter	
CF7	YW4FS6499	Filter	
CF9,102	YW4FT6912	Filter	
CF141	YW4FT7021	Filter	
CF142,143	YW4FW6997	Filter	
CF241	YW4FT7021	Filter	
CF242,243	YW4FW6997	Filter	
CF350	YW4FT7021	Filter	
CF351	YW4FT6912	Filter	
CN1	YW526101390	13-pin Connector	
CN4,5	YW526102090	20-pin Connector	
CN6	YW530141010	10-pin Connector	
CN7,8	YW526101390	13-pin Connector	
CN9	YW526101690	16-pin Connector	
CN10	YW526102090	20-pin Connector	
E1	YWL3071A07A5	Cable	
TP1-4	YWRCT2125TPV	Test-pin	
TP100-103	YWRCT2125TPV	Test-pin	
TP105-110	YWRCT2125TPV	Test-pin	
TP200-203	YWRCT2125TPV	Test-pin	
TP205-210	YWRCT2125TPV	Test-pin	
TP350-352	YWRCT2125TPV	Test-pin	
TP580,600	YWRCT2125TPV	Test-pin	
TP700,800	YWRCT2125TPV	Test-pin	
TP801,900	YWRCT2125TPV	Test-pin	
TP901	YWRCT2125TPV	Test-pin	
M24	YWV2PA0614A4	Insulater Sheet	
M25	YWV2HA1153A1	Shield Parts	
M26	YWV2HA1156A1	Shield Part	
M27	YWV2HA1157B1	Shield Part	

POWER BOARD

REF.NO.	PART NO.	DESCRIPTION	
PCB2 (RTL)	YWJKZAVE7E3A	Printed Circuit Board Assy	
IC1	YWUPC24M12HF	IC	
IC2	YWUPC78N12H	IC	
IC3	YWTA76431S	IC	
Q1 ⚠	2SC3866	Transistor	
Q2,3	2SC3377	Transistor	
Q4,5	2SD2132	Transistor	
Q6	2SA1244Y	Transistor	
D1 ⚠	S1WBA60	Diode	
D2	YWERA34-10	Diode	
D3	EM01Z	Diode	
D4	YWERA9102	Diode	
D5	YWPC111LY	Diode	
D6	YWERA84009	Diode	
D7	ERC81-004	Diode	
D8	RD5.1JB2	Diode	
D9	YWERA84009	Diode	
VS1 ⚠	ERZC07DK471U	ZNR	
R1 ⚠	ERC12ZGM105	Solid Resistor	100K ohms
R2	ERF5TJ220	Wire Wound	22 ohms 5W
R3-5	ERD25FJ224	Carbon	220K ohms 1/4W
R6	ERD25FJ101	Carbon	100 ohms 1/4W
R7	ERG1SJ391	Metal	390 ohms 1W
R8	ERDS2TJ331	Carbon	330 ohms 1/4W
R9	ERDS2TJ101	Carbon	100 ohms 1/4W
R10	ERX1SJ1R5	Metal	1.5 ohms 1W
R11	ERDS2TJ222	Carbon	2.2K ohms 1/4W
R12	ERDS2TJ102	Carbon	1K ohms 1/4W
R13	ERDS2TJ334	Carbon	330K ohms 1/4W
R14	ERDS2TJ561	Carbon	560 ohms 1/4W
R15,16	ERDS2TJ102	Carbon	1K ohms 1/4W
R17	ERDS2TJ152	Carbon	1.5K ohms 1/4W
R18	ERDS2TJ470	Carbon	47 ohms 1/4W
R19	ERDS2TJ102	Carbon	1K ohms 1/4W
R20	ER0S2CKF7501	Metal	7.5K ohms 1/4W
R21	ER0S2CKF6801	Metal	6.8K ohms 1/4W
R22	ERC12ZGM156	Solid Resistor	15M ohms 1/2W
VR1	YWH0621A1K	Variable Resistor	1K ohms
C1,2 ⚠	ECQU2A104MV	Plastic	0.1 µF
C3-5 ⚠	ECKDRS332ME	Ceramic	3300 pF
C6,7	ECKDRS222ME	Ceramic	2200 pF
C8	EC0S2GA680CB	Electrolytic	68 µF 4V
C9	ECQE6103KZ	Plastic	0.01 µF
C10,11	ECKD3A221KBP	Ceramic	220 pF
C12	ECQB1H152JZ	Plastic	1500 pF 50V
C13	ECQB1H682JF	Plastic	6800 pF 50V
C14,15	ECEA1HKG2R2	Electrolytic	2.2 µF 50V
C16	ECQB1H332JZ	Plastic	3300 pF 50V
C17	ECEA1HKG100	Electrolytic	10 µF 50V
C18	ECA1EFQ221	Electrolytic	220 µF 25V
C19	ECA1CFQ121	Electrolytic	120 µF 16V
C20,21	ECA1AFQ102	Electrolytic	1000 µF 10V
C22	ECA1AFQ331	Electrolytic	330 µF 10V
C23-25	ECA1AFQ181	Electrolytic	180 µF 10V
C26	ECA1EFQ221	Electrolytic	220 µF 25V
C27	ECA1CFQ121	Electrolytic	120 µF 16V
C28	ECQB1H103JZ	Plastic	0.01 µF
C29,30	ECA1CFQ121	Electrolytic	120 µF 16V
L1	ELF18D222F	Coil	2200 µH
L2	YWPC7560K	Coil	56 µH
L3	YWPC7120K	Coil	12 µH
L4-6	YWPC7220K	Coil	22 µH
L7-11	YWPC7560K	Coil	56 µH
T1 ⚠	ETS27BA167AC	Power Transformer	
SW1 ⚠	YWSJP4A01BBM	Power Switch	
CN1,2	YWTBGP05PC4	5-pin Connector	
CN3	YW520301310	13-pin Connector	
CN4	YWF794P010LA	10-pin Connector	
F1 ⚠	XBA2C16ET0A	Current Fuse	1.6A 250V
SF2 ⚠	YWSSFR1AF002	Current Fuse	0.1A
SF3-5 ⚠	SSFR630F002	Current Fuse	0.63A
SF6 ⚠	SSFR400F002	Current Fuse	0.4A
E1,2	S-N5057	Fuse Holder	
E3,4	YW851248	Insulator	
E5,6	YW851040	Insulator	
M28	YWDBA21.5	Heat Sink	

INLET BOARD

REF.NO.	PART NO.	DESCRIPTION
PCB3 (RTL)	YWJKYAVE7P2A	Printed Circuit Board Assy
CN1,2	YWTBGP05PC4	5-pin Connector
CN7 ⚠	YWM1779D	Socket

REAR BOARD

REF.NO.	PART NO.	DESCRIPTION
PCB4 (RTL)	YWJKZAVE7P1A	Printed Circuit Board Assy
CN1,2	YW524922020	20-pin Connector
CN3	YW524922020	20-pin Connector
JK3	YWD4183J200	4-pin Connector
JK8,11	YWD4183J200	4-pin Connector
JK17,21	YWD4183J200	4-pin Connector

SWITCH BOARD

REF.NO.	PART NO.	DESCRIPTION	
PCB5 (RTL)	YWJKBAVE7P1A	Printed Circuit Board Assy	
IC1,2	YWM5283P	IC	
IC3,4	YWNJM2068DD	IC	
IC5	YWM5283P	IC	
IC6	YWNJM2068DD	IC	
IC7	YWM5216P	IC	
IC203-206	YWHD74HC244P	IC	
IC210	NJM78L05A	IC	
Q1-4	2SD1992A	Transistor	
Q5	2SB1320A	Transistor	
Q6-9	2SD1992A	Transistor	
Q20-23	2SD1992A	Transistor	
Q240-243	2SD1992A	Transistor	
Q251-266	2SD1992A	Transistor	
Q300,301	2SD1992A	Transistor	
D1,2	MA165	Diode	
D100,203	YWSLR305LCA	LED	
D204-214	YWSLR305LCA	LED	
D221-227	YWSLR305LCA	LED	
D229-235	YWSLR305LCA	LED	
D241-246	YWSLR305LCA	LED	
D248-251	YWSLR305LCA	LED	
D253-256	YWSLR305LCA	LED	
D261-264	YWSLR305LCA	LED	
D267-276	YWSLR305LCA	LED	
D280-283	MA165	Diode	
R1	ERDS2TJ101	Carbon	100 ohms 1/4W
R2	ERDS2TJ203	Carbon	20K ohms 1/4W
R3	ERDS2TJ302	Carbon	3K ohms 1/4W
R4	ERDS2TJ101	Carbon	100 ohms 1/4W
R5	ERDS2TJ203	Carbon	20K ohms 1/4W
R6	ERDS2TJ302	Carbon	3K ohms 1/4W
R7	ERDS2TJ101	Carbon	100 ohms 1/4W
R8	ERDS2TJ203	Carbon	20K ohms 1/4W
R9	ERDS2TJ302	Carbon	3K ohms 1/4W
R10	ERDS2TJ101	Carbon	100 ohms 1/4W
R11	ERDS2TJ203	Carbon	20K ohms 1/4W
R12	ERDS2TJ302	Carbon	3K ohms 1/4W
R13-16	ER0S2CKF4702	Metal	47K ohms 1/4W
R17-20	ER0S2CKF2202	Metal	22K ohms 1/4W
R21	ER0S2CKF3301	Metal	3.3K ohms 1/4W
R22	ER0S2CKF3302	Metal	33K ohms 1/4W
R23	ER0S2CKF1001	Metal	1K ohms 1/4W
R24	ER0S2CKF2202	Metal	22K ohms 1/4W
R25,26	ER0S2CKF2702	Metal	27K ohms 1/4W
R27	ER0S2CKF2202	Metal	22K ohms 1/4W
R28	ER0S2CKF3302	Metal	33K ohms 1/4W
R29	ER0S2CKF2202	Metal	22K ohms 1/4W
R30	ER0S2CKF3302	Metal	33K ohms 1/4W
R31-33	ER0S2CKF1001	Metal	1K ohms 1/4W
R34,35	ER0S2CKF4702	Metal	47K ohms 1/4W
R36	ER0S2CKF1502	Metal	15K ohms 1/4W
R37	ER0S2CKF4702	Metal	47K ohms 1/4W
R38	ER0S2CKF1502	Metal	15K ohms 1/4W
R39	ER0S2CKF4702	Metal	47K ohms 1/4W
R40,41	ERDS2TJ103	Carbon	10K ohms 1/4W
R42,43	ER0S2CKF4302	Metal	43K ohms 1/4W
R44	ER0S2CKF1003	Metal	100K ohms 1/4W
R45	ER0S2CKF1000	Metal	100 ohms 1/4W
R46	ER0S2CKF1002	Metal	10K ohms 1/4W
R47	ER0S2CKF1003	Metal	100K ohms 1/4W
R48	ER0S2CKF1000	Metal	100 ohms 1/4W
R49	ER0S2CKF1002	Metal	10K ohms 1/4W
R50,51	ERDS2TJ103	Carbon	10K ohms 1/4W
R52	ERDS2TJ104	Carbon	100K ohms 1/4W
R53	ERDS2TJ103	Carbon	10K ohms 1/4W
R54	ER0S2CKF1001	Metal	1K ohms 1/4W
R55	ER0S2CKF1501	Metal	1.5K ohms 1/4W
R56	ER0S2CKF1001	Metal	1K ohms 1/4W
R57	ER0S2CKF1501	Metal	1.5K ohms 1/4W
R58	ER0S2CKF1001	Metal	1K ohms 1/4W
R59	ER0S2CKF1501	Metal	1.5K ohms 1/4W
R60	ER0S2CKF1001	Metal	1K ohms 1/4W
R61	ER0S2CKF1501	Metal	1.5K ohms 1/4W
R70-73	ERDS2TJ103	Carbon	10K ohms 1/4W
R107	ERDS2TJ272	Carbon	2.7K ohms 1/4W
R200	ERDS2TJ103	Carbon	10K ohms 1/4W
R201	ERDS2TJ102	Carbon	1K ohms 1/4W
R202	ERDS2TJ103	Carbon	10K ohms 1/4W
R203	ERDS2TJ102	Carbon	1K ohms 1/4W
R204	ERDS2TJ103	Carbon	10K ohms 1/4W
R205	ERDS2TJ102	Carbon	1K ohms 1/4W
R206	ERDS2TJ103	Carbon	10K ohms 1/4W
R207	ERDS2TJ102	Carbon	1K ohms 1/4W
R208	ERDS2TJ103	Carbon	10K ohms 1/4W
R209	ERDS2TJ102	Carbon	1K ohms 1/4W
R210	ERDS2TJ103	Carbon	10K ohms 1/4W
R211	ERDS2TJ102	Carbon	1K ohms 1/4W
R212	ERDS2TJ103	Carbon	10K ohms 1/4W
R213	ERDS2TJ102	Carbon	1K ohms 1/4W
R214	ERDS2TJ103	Carbon	10K ohms 1/4W
R215	ERDS2TJ102	Carbon	1K ohms 1/4W
R216	ERDS2TJ103	Carbon	10K ohms 1/4W
R217	ERDS2TJ102	Carbon	1K ohms 1/4W
R218	ERDS2TJ103	Carbon	10K ohms 1/4W
R219	ERDS2TJ102	Carbon	1K ohms 1/4W
R220	ERDS2TJ103	Carbon	10K ohms 1/4W
R221	ERDS2TJ102	Carbon	1K ohms 1/4W
R222	ERDS2TJ103	Carbon	10K ohms 1/4W
R223	ERDS2TJ102	Carbon	1K ohms 1/4W
R224	ERDS2TJ103	Carbon	10K ohms 1/4W
R225	ERDS2TJ102	Carbon	1K ohms 1/4W
R226	ERDS2TJ103	Carbon	10K ohms 1/4W
R227	ERDS2TJ102	Carbon	1K ohms 1/4W
R228	ERDS2TJ103	Carbon	10K ohms 1/4W
R229	ERDS2TJ102	Carbon	1K ohms 1/4W
R230	ERDS2TJ103	Carbon	10K ohms 1/4W
R231	ERDS2TJ102	Carbon	1K ohms 1/4W
R235-238	ERDS2TJ512	Carbon	5.1K ohms 1/4W
R240-243	ERDS2TJ104	Carbon	100K ohms 1/4W
R251-266	ERDS2TJ101	Carbon	100 ohms 1/4W
R270-285	ERDS2TJ103	Carbon	10K ohms 1/4W
R290	ERDS2TJ101	Carbon	100 ohms 1/4W
R291	ERDS2TJ100	Carbon	10 ohms 1/4W
R292	ERDS2TJ101	Carbon	100 ohms 1/4W
R293	ERDS2TJ100	Carbon	10 ohms 1/4W
R75	ERDS2TJ0R00	Carbon	0 ohms 1/4W
R76	ERDS2TJ0R00	Carbon	0 ohms 1/4W
R90	ERDS2TJ0R00	Carbon	0 ohms 1/4W
R91	ERDS2TJ0R00	Carbon	0 ohms 1/4W
R92,93	ERDS2TJ0R00	Carbon	0 ohms 1/4W
VR1-3	EWAQA1X05C54	Variable Resistor	50K ohms
VR4	EWAQFEX05C54	Variable Resistor	50K ohms
VR6,7	EVNDXAA03B33	Variable Resistor	3K ohms
VR8	EWAQFEX05B15	Variable Resistor	100K ohms
VR9	EWAPFEX05B15	Variable Resistor	100K ohms
VR10,11	EVJ02AF20B15	Variable Resistor	100K ohms
VR12	EVJ02AF20A15	Variable Resistor	100K ohms
C1-4	YWUP05S220JN	Ceramic	22 pF
C5-8	ECEA1AKA220	Electrolytic	22 µF 10V
C9-12	ECEA1EKN4R7	Electrolytic	4.7 µF 25V
C13,14	ECEA1EKA470	Electrolytic	47 µF 25V
C15	ECEA1AKA470	Electrolytic	47 µF 10V
C16,17	ECEA1EKA470	Electrolytic	47 µF 25V
C18	ECEA1AKA470	Electrolytic	47 µF 10V
C19-22	ECEA1AKN100	Electrolytic	10 µF 10V
C23,24	ECEA1AKN220	Electrolytic	22 µF 10V
C25	ECEA1HKN010	Electrolytic	1 µF 50V
C26	YWUP05B101KN	Ceramic	100 pF
C27	YWUP05F104ZA	Ceramic	0.1 µF
C28	YWUP05B101KN	Ceramic	100 pF
C29	ECEA1HKN010	Electrolytic	1 µF 50V
C30	YWUP05B101KN	Ceramic	100 pF
C31	YWUP05F104ZA	Ceramic	0.1 µF
C32	YWUP05S270JN	Ceramic	27 pF
C33	ECEA1EKN100	Electrolytic	10 µF 25V
C35-38	YWUP05B101KN	Ceramic	100 pF
C39,40	YWUP05F104ZA	Ceramic	0.1 µF
C41,42	ECEA1AKN220	Electrolytic	22 µF 10V
C43,44	ECEA1EKN4R7	Electrolytic	4.7 µF 25V
C45,46	ECEA1EKA470	Electrolytic	47 µF 25V
C47	ECEA1AKA220	Electrolytic	22 µF 10V
C48,49	ECEA1AKN100	Electrolytic	10 µF 10V
C50	YWUP05B101KN	Ceramic	100 pF
C51	YWUP05S330JN	Ceramic	33 pF
C52	YWUP05B101KN	Ceramic	100 pF
C53	YWUP05S330JN	Ceramic	33 pF
C54,55	YWUP05F104ZA	Ceramic	0.1 µF
C56,57	ECEA1AKN100	Electrolytic	10 µF 10V
C58	YWUP05B101KN	Ceramic	100 pF
C59	YWUP05B820KN	Ceramic	82 pF
C61	YWUP05B101KN	Ceramic	100 pF
C62	YWUP05B820KN	Ceramic	82 pF
C63,64	YWUP05F104ZA	Ceramic	0.1 µF
C65,66	YWUP05B102KN	Ceramic	1000 pF
C67,68	ECEA1AKN470	Electrolytic	47 µF 10V
C69	YWRC325T1015	Electrolytic	10 µF 25V
C70	ECEA1HKS100	Electrolytic	10 µF 50V
C71-74	ECEA1CKA100	Electrolytic	10 µF 16V
C75,76	ECEA1HKAR47	Electrolytic	0.47 µF 50V
C77-80	ECEA0JKS331	Electrolytic	330 µF 6.3V
C81	YWUP05F104ZA	Ceramic	0.1 µF
C82	ECEA1CKA101	Electrolytic	100 µF 16V
C83,84	ECEA1EKA470	Electrolytic	47 µF 25V
C85	ECEA1CKS101	Electrolytic	100 µF 16V
C90-95	ECEA1VKS470	Electrolytic	47 µF 35V
C100-107	ECEA1VKS470	Electrolytic	47 µF 35V
C200,201	ECEA1CKA100	Electrolytic	100 µF 16V
C205	ECEA1CKA100	Electrolytic	100 µF 16V
C206	YWUP05F104ZA	Ceramic	0.1 µF
C207	ECEA1CKA470	Electrolytic	47 µF 16V
L1	ELESE220KA	Coil	22 µH
L2	ELESE101KA	Coil	100 µH
L3	ELESE220KA	Coil	22 µH
L4	ELESE101KA	Coil	100 µH
L5,6	ELESE220KA	Coil	22 µH
L200,201	ELESE220KA	Coil	22 µH
L205,206	ELESE220KA	Coil	22 µH
SW201-214	EVQQTU05R	Push Switch	
SW221-227	EVQQTU05R	Push Switch	
SW229-235	EVQQTU05R	Push Switch	
SW236	YWEP3301R01	Push Switch	
SW241-246	EVQQTU05R	Push Switch	
SW247	YWEP3301G01	Push Switch	
SW248-251	EVQQTU05R	Push Switch	
SW253-256	EVQQTU05R	Push Switch	
SW261-263	EVQQTU05R	Push Switch	
SW267-270	EVQQTU05R	Push Switch	
SW272-275	EVQQTU05R	Push Switch	
CN1	YW524922020	20-pin Connector	
CN2	YWF795P010LA	10-pin Connector	
CN3	YW524921320	13-pin Connector	
CN4	YW530150410	4-pin Connector	
CN5	YW524922020	20-pin Connector	
CN6	YW530150510	5-pin Connector	
CN7	YW524921620	16-pin Connector	
CN8	YW530150210	2-pin Connector	

POSITIONER BOARD

REF.NO.	PART NO.	DESCRIPTION
PCB6 (RTL)	YWJKCAVE7P1A	Printed Circuit Board Assy
VR1	YWVL201104L	Variable Resistor 100K ohms
CN1	YW530150510	5-pin Connector

JACK BOARD

REF.NO.	PART NO.	DESCRIPTION
PCB7 (RTL)	YWJKYAVE7P1A	Printed Circuit Board Assy
VR1	YWS152KGD10	Variable Resistor
CN1	YW520301310	13-pin Connector
CN2	YW53014-0210	2-pin Connector
JK1	YWHSJ0912020	Jack
JK2	YWHSJ0912040	Jack

ACCESSORY PARTS/PACKAGING PARTS

REF.NO.	PART NO.	DESCRIPTION
M51	YWV8QA3133AN	Operating Instructions
M52	YWV8RA0362AN	Printed Matters
M53	XZB26X40C05	Polyethylene Bag
	YWPE26X40C05	Polyethylene Bag for WJ-AVE7/G
M54	YWT25X60X3	Polyethylene Bag
	YWPE25X60X3	Polyethylene Bag for WJ-AVE7/G
M55	XZB55X71C1	Polyethylene Bag
	YWPE55X71C1	Polyethylene Bag for WJ-AVE7/G
M60	YWV9CA2104BN	Packaging Assy for WJ-AVE7/A
	YWV9CB2104BN	Packaging Assy for WJ-AVE7/B
	YWV9CC2104BN	Packaging Assy for WJ-AVE7/C
	YWV9CD2104BN	Packaging Assy for WJ-AVE7/G
M61	YWV8FA0200A4	Packaging Label A
M62	YWS-SNPRB06	Packaging Label B
M63	YWV7SA1848A3	Bar Code Label for WJ-AVE7/B
	YWV7SA1850A3	Bar Code Label for WJ-AVE7/G

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